Annual Administration Report
of the
Forest Department of the
Madras Presidency.
1914-1915 to 1916-17 & 1918-19

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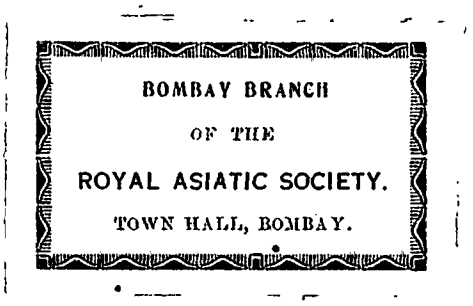


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# ANNUAL ADMINISTRATION REPORT

OF THE

# FOREST DEPARTMENT

OF THE

## MADRAS PRESIDENCY.

FOR THE

## TWELVE MONTHS ENDING 30TH JUNE 1915.

1914-1915. & 1916-17 and 1918-19

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### MADRAS PRESIDENCY,

NORTHERN CIRCLE, 1914–1915.


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OFFICE OF THE CONSERVATOR OF FORESTS,
NORTHERN CIRCLE,
WALTAIR, 11*th September* 1915.

R.C. No. 1664 of 1915.

From

A. W. LUSHINGTON, Esq., C.I.E.,
CONSERVATOR OF FORESTS,
*Northern Circle,*

To

THE SECRETARY TO THE COMMISSIONERS OF
LAND REVENUE AND FORESTS,
*Madras.*

SIR,

I have the honour to submit herewith my report on the Forest Administration of the Northern Circle for the year 1914–15.

I have the honour to be,
Sir,
Your most obedient servant,
A. W. LUSHINGTON,
*Conservator of Forests, Northern Circle.*

# FOREST ADMINISTRATION REPORT OF THE NORTHERN CIRCLE

FOR THE

FOREST YEAR ENDING 30TH JUNE 1915.

## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in Area.

The following statement shows the abstract of changes in forest areas :—

| Class. | Area on 1st July 1914. | Added during the year. | Excluded during the year. | Net increase or decrease. | Area on 30th June 1915. |
|---|---|---|---|---|---|
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Reserved forests .. .. .. .. | 4,614 | 13 | 11 | + 2 | 4,616 |
| Reserved lands .. .. .. .. | 507 | 1 | 8 | — 7 | 500 |
| Leased forests .. .. .. .. | 2 | .. | .. | .. | 2 |
| Total .. | + 5,123 | 14 | 19 | — 5 | 5,118 |

Eight square miles in *Vizagapatam* were finally constituted reserved forests and 5 square miles added in *Kistna* by rectification of boundaries ; while again 11 square miles were disafforested in the latter district. One square mile in *Vizagapatam* was made reserved land. The other changes are of minor importance.

### 2. Forest Settlement.

2. Fifteen blocks (507 square miles) remained to be settled at the commencement of the year, to which two (·60 square mile) were added during the year ; of these, three blocks (8·19 square miles) were transferred to reserved forests leaving 14 blocks (498·98 square miles) pending at the end of the year. Of these 14, two were with the Board, one returned for correction, two with the Collector, one pending decision of an appeal before the Privy Council and settlement was proceeding in respect of 8 blocks (352·15 square miles) in *Upper Gōdāvari*.

### 3. Demarcation.

3. One hundred and seven miles of external demarcation was carried out in *Ganjām* at a cost of Rs. 2,450 and 3,865 miles were repaired at a cost of Rs. 3,275 and 1,297 miles were recleared by the Forest subordinates free of cost. The average cost per mile of fresh demarcation was Rs. 22–14–4 and repair Re. 0–13–7 against Rs. 22–7–7 and Rs. 7–13–4 in the previous year.

### 4. Forest Surveys.

#### (*a*) *By Survey of India.*

4. No new work was undertaken during the year. The index maps of the three divisions of *Kurnool* are still under different stages of preparation.

#### (*b*) *By Departmental Survey.*

5. During the year Rs. 10,560 were spent on Forest Surveys and maps for 502 square miles of reserved forests are yet to be done —124 square miles in *Kistna*, 3 in *Kurnool East*, 95 in *Kurnool South* and 280 in *Kurnool West*. The departmental work that was carried out during the year consisted chiefly of the verification of boundaries, alignment of roads and fire lines and preparation of coupe and working

plan and other maps. Out of seventeen selected blocks, 10 blocks comprising an area of 120 square miles in the Rampa territory (including Guditeru and Datsarty muttahs) in *Gōdāvari Lower* were surveyed but maps were not prepared.

*Dupati survey.*—The ten appeals pending at the end of previous year were disposed of during the year.

## CHAPTER II.—MANAGEMENT OF STATE FORESTS.

### 1. Regulation of Management.

#### (*a*) *Preparation and Control of Regular Working Plans.*

6. *Preparation.*—In most of the districts Working Plans are still being delayed by the preliminary classification of reserves under the Forest Committee's report. But in *Ganjām* a tentative Working Plan for the Mohiri hills of Berhampur range has been sanctioned. In *Gōdāvari Lower* the preliminary Working Plans prepared for the Gokavaram and Peddapur ranges were returned for revision with reference to the said classification and in *Kurnool West* an additional provision in the Working Plan for the pollarding of Yepi trees (*Hardwickia binata*) in the grazing areas of the Yerramalais for rope fibre is awaiting the sanction of the Board. The Working Plans for other districts are under different stages of preparation as also one for the Alamore palmyra tope in *Kurnool West.*

7. *Control.*—The prescriptions of the Working Plans were generally adhered to except in the following cases. In *Ganjām* the accumulated balances of forest unworked in previous years were partly worked during the year and four bamboo coupes and 5 fuel coupes which were not provided for in the Working Plan were worked out to meet local demand. In *Kistna* the construction of the walls round the reserves in Bezwada taluk and round those in Ellore range was put a stop to and prickly-pear fencing was made instead. In *Kurnool West* cultural operations in the Yerramalais were abandoned, and the working of timber coupes in Atmakur, Velgode and Nandyal ranges was continued under coppice with standard system until September 1914 when work in the coupes was stopped.

#### (*b*) *Annual Plan of Operations.*

8. The sanctioned plans were generally followed, except as detailed under Working Plans above and in the following cases. In *Ganjām* Ramagodo and Thinikondia coupes were leased to contractors, fencing of one compound completed and another begun and a well was sunk in the Extra Assistant Conservator's bungalow at Russellkonda. Construction of a fourth bridge over Odangi Nalla was not started and two bridle-paths abandoned in Pondakhol range. In *Vizagapatam* a bamboo coupe was worked departmentally for want of a contractor, in *Gōdāvari Upper* a well was postponed, in *Kistna* certain minor works in the three ranges were given up and in *Kurnool West* fencing the compound at Pecheruvu was carried out while the gang sheds in the Dhone range were abandoned. In *Gōdāvari Lower* and *Kurnool South* certain buildings and roads were given up, preference being given to those of a more urgent nature.

### 2. Communications and Buildings.

9. The following figures compare the outlay on communications and buildings :—

| | 1913-14. | 1914-15. |
|---|---|---|
| | Rs. | Rs. |
| Roads and bridges ... ... ... ... ... | 31,588 | 32,333 |
| Buildings ... ... ... ... ... ... ... | 43,789 | 31,216 |
| Other works ... ... ... ... ... ... | 8,869 | 3,096 |

The increase under roads is due to the construction of five new roads in *Gōdāvari Upper* (Koya work), one earthern road made in *Gōdāvari Lower* and largely to the contribution of Rs. 5,000 to the Local Fund Department towards the maintenance of the two Nallamalais ghat roads from each of the *Kurnool East* and *Kurnool South* districts.

#### (*a*) *Roads and Bridges.*

The important works of a permanent nature executed during the year were the following :—

*Ganjām.*—Four miles of new roads and the Tarsingi-Jadadhara road were completed, 51 miles of existing roads repaired and a third bridge over Odangi Nalla was partly constructed.

*Gōdāvari Upper.*—Five new roads were in progress.

*Gōdāvari Lower.*—More than two miles of an earthern road from Sarabhavaram to Boyapadu was completed and 82 miles of existing roads were repaired.

*Kistna.*—The Nallacherla-Kodegudem road was completed and Errakuruva hill road was partly constructed.

*Kurnool East.*—Nine miles of bridle-path were converted into cart-track. Three bridle-paths over a length of 11 miles and 5 miles of foot-path constructed and 30 miles of foot-path were converted into bridle-path.

*Kurnool South.*—Four miles of bridle-path was made and about 58 miles of existing roads were improved and repaired. A sum of Rs. 5,000 was contributed to the Local Board from each of the *Kurnool East* and *Kurnool South* divisions for the maintenance of the Mantralakanama and Nandikanama ghat roads respectively.

*Kurnool West.*—Two cart-tracks of $\frac{1}{4}$ and $1\frac{1}{2}$ miles long in Gundlabrahmeswaram range were constructed and a cutting in the Adutla road was made to reduce the gradient.

### (*b*) *Buildings.*

The important works of a permanent nature carried out during the year were the following: rest-house at Chahali in *Ganjām* and at Sudikonda in *Gōdāvari Lower* completed and inspection sheds at Tummalabailu and Chintala in *Kurnool East* nearly completed. Range quarters at Jangareddigudem in *Gōdāvari Lower* in progress and the range quarters at Eguvacherlopalli in *Kurnool East* completed, subordinates' quarters at Urrinka and Jangareddigudem in *Gōdāvari Lower*, at Chinnamantrala in *Kurnool East*, at Malakondapenta and Mahanandi in *Kurnool South* were completed. Range inspection shed at Nekkanti in *Kurnool East* and Kutcha quarters for a Deputy Ranger at Isukagundam in *Kurnool South* and sheds for subordinates in *Kurnool West* were also constructed, and additions such as out-houses kitchens, stables, etc., to existing buildings, and sheds to house forest guards and forest watchers, etc.

### (*c*) *Miscellaneous Works.*

The chief works done were the construction and repair of tanks, wells and springs and digging and widening channels. Bunds were also erected across streams and streamlets in the Gundlabrahmeswaram range in *Kurnool West.*

## 3. Protection of Forests.

### (*a*) *General Protection.*

10. The following statement shows the number and classification of forest offences brought to light during the year :—

| Cases. | Injury to forests by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in forests in which grazing is prohibited. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15 | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| Cases taken into court .. | 9 | 8 | 485 | 462 | 174 | 194 | 54 | 63 | 722 | 727 |
| Cases compounded .. | 5 | 5 | 2,111 | 1,812 | 742 | 706 | 134 | 132 | 2,992 | 2,655 |
| Cases undetected . .. | 220 | 289 | 179 | 183 | 5 | 34 | 5 | 3 | 409 | 509 |
| Total .. | 234 | 302 | 2,775 | 2,457 | 921 | 934 | 193 | 198 | 4,123 | 3,891 |

The number of cases reported was less than in the previous year and decrease was under unauthorised fellings though counterbalanced by slight increase under all other heads. The decrease in *Kistna* is due to better supervision by the introduction of the gang system of patrolling and in *Kurnool South* to the imposition of deterrent composition fees in the cases of professional thefts of timber especially in the Sirvel

taluk which would seem to have had its effect in the reduction in the number of offences and also partly due to selling of lines and coupes, to severe notice taken in court of such offence and to the effect of more sufficient patrol by gangs. The increase under injury to forests by fire mostly in *Kurnool West* is due to the inclusion of the large number of fires occurred in areas under special and general protection which were omitted in previous years as their causes were unknown.

11. There were 674 cases pending at the beginning and 556 at the end of the year; of these latter 129 were with the Magistrates. Out of the cases brought to trial during the year, 758 ended in conviction, 88 in acquittal against 722 and 76, respectively, in the previous year; the percentage of failure being 10·40 against 9·52 in the previous year.

*Closure of forests to grazing for not reporting or preventing illicit grazing or other offences on a large scale.*

12. Nowhere was the necessity found to close the forests on this account, but the privilege of free grazing of 200 head of cattle was suspended for one year to take effect from 1st July 1915 in *Vizagapatam* owing to the indifference of Kondasantha villagers to render timely help in putting out fires that broke in the vicinity of the village. Statistics of offences near villages were taken with a view to enforcing closure next year to the worst offending villages in *Kurnool West.*

13. Two thousand three hundred and thirty cases were compounded for Rs. 24,310 against Rs. 23,971 collected in the previous year on 2,494 cases compounded. Though the number of cases compounded were less than in the previous year, the amount of compounding fees collected was greater due to levy of deterrent fees in grave cases in *Vizagapatam* and in the cases of professional thefts already referred to in *Kurnool South.*

14. No rewards were granted except in *Gōdāvari Lower* where a sum of Rs. 8 was paid to certain Hill Reddis for rendering assistance in the detection of a timber theft. In *Ganjām* rewards in the shape of rice valued at Rs. 165 were granted to Pondakhol Khonds for protecting the forests and ten pairs of bulls at a cost of Rs. 364 were also granted to enable them to cultivate the lands in the valleys and thereby to compensate them for having given up *podu* cultivation. About Rs. 7,000 were distributed by the District Forest Officer or his Assistant as rewards to Koyas, etc., in *Upper Gōdāvari* for having protected the forests from fire. Rs. 1,162 were paid under Board's sanction to the Chentsus of Gudem Range in the shape of clothes, etc., for successful fire protection in *Kurnool East.*

*(b) Protection from Fire.*

15. The areas attempted and protected are given in Form No. 72. The system of fire protection was the same as usual and the clearing of fire lines by purchasers themselves of the materials thereon was followed in *Kurnool South* and *Kurnool West*, but in the latter district this was not found very suitable as the localities were in most cases away from rail and road communication. In *Ganjām* the Khonds, allowed the usual concessions, assisted in extinguishing fires, fire patrols being employed only where they were not available. The fire season this year was an exceptionally difficult one as there were no rains at all till the middle of May 1915 which was most unusual. The result was not so bad, however, but most of the fires that occurred were due to carelessness on the part of Khonds and others who travel through the forests at night carrying torches, leaving glowing ashes here and there though intentional incendiarism was not anywhere noticed. Protection of sal massif coupes and of areas protected by 60 feet wide fire line was fairly successful. In *Vizagapatam* the protection of Dharakonda reserve was a success but not so in the case of Sinivaram reserve owing to the slackness of the subordinates in fire tracing the lines early in the season and to the indifference in rendering help by Kondasantha villagers already referred to. In *Gōdāvari Upper* steps were taken to reward the Koyas and Reddis by results and the system promises to be a great success and it is hoped to enhance rewards where complete protection has been ensured. Several fire lines were widened and the reserves in the Bhadrāchalam taluk were especially immune from fire due to the readiness with which the hill tribes assisted and also to the favourable season, there being rain at frequent intervals during February to May. On the contrary in Nugur taluk although the hill tribes were just as keen in getting

their lines cleared, the rain held off most unfortunately and the forests consequently were very dry during the whole season, the result being that a very large area was burnt over. This result is also ascribed to the ineffectual fire lines and also to the extensive boundary along the Bastar State being practically useless as a fire line, as it can be widened only after the Bastar boundary is settled. In *Gōdāvari Lower* the services of the hillmen were more frequently utilized in fire protection and payments by results were made. Ninety-nine per cent. of the area escaped fire, good rains in April and May being mainly responsible for this satisfactory results. In *Kistna* out of 60,229 acres attempted, 60,196 acres were protected the success being ascribed to early rains. In *Kurnool East* the area successfully protected was 136,091 acres out of 151,235 acres attempted the number of fires being 22. The worst fire of the year was the one which is said to have entered the Gudem Range from the *West* district at four places which could not be controlled for nearly four days, although the Chentsus of the two gudems of Chinnamantrala and Maddipenta tried to extinguish it. Fire protection was introduced for the first time during the year in Markapur and Cumbum Ranges with satisfactory results. The Chentsus, on the whole, behaved very well during the fire season especially those of Telugurayanicheruvugudem a large portion of which was burnt in the previous year. In *Kurnool South* owing to heavy rains and rain continuing till November and December the fire tracing was continued till 14th February. The lines in Chelama and Gundlakamma Ranges were kept clear of growth throughout the year by the employment of fire patrols. Four hundred square miles were successfully protected out of 522 attempted and the large burnt area is due to the large number of fires occurred in Giddalore and Sirvel Ranges. The chief works of the year besides the usual fire protection operations in *Kurnool West* were the widening of Sim's line to 100 feet and the fire tracing of the central Nallamalais road to a width of 60 feet. Practically the whole of the Nandyal Range was burnt by the fires which occurred late in the year. Most of the fires appear to have been started by Chentsus but two in Gundlabrahmeswaram Range were started by timber dragging Woddars. One Chentsu was actually seen by the Special officer for Chentsus with a torch setting fire to the forest, but could not be caught or identified.

16. Rupees 65,273 were spent on fire protection during the year. The area dealt with was more or less the same as in the previous year, *i.e.*, 4,447 square miles, of these 4,094 square miles were successfully protected against 3,898 square miles during the previous year; the proportion of failure fell to 7·94 from 12·97 in the previous year, the cost per square mile successfully protected rose to Rs. 15–15–1 from Rs. 13–15–9 in the previous year. The increase in cost is due to widening up of the Pondakhol boundary in *Ganjām* and Sim's line in *Kurnool West* and to the large amount of rewards made to Koyas and Reddis in *Gōdāvari Upper*.

17. Appendix A shows the number and origin of fires.

There was a slight fall in the total number of fires with appreciably less damage than in the previous year, the number of fires under causes unknown showing a small increase with a less area burnt.

### (*c*) *Protection from Cattle.*

18. Out of 5,118 square miles 1,163 were closed to all animals throughout the year against 952 in the previous year, *Kurnool South* and *Gōdāvari Lower* contributing mostly to the increase. Goats were completely excluded from the forests.

19. Appendix B shows the number of cattle impounded during the year compared with the average of the three years preceding. The average shows a marked decrease in *Kurnool East* and *Kurnool South* though there was a slight increase in *Kurnool West*. But the past years figures show a rise over the averages mostly in the first two districts and in *Kistna*; the increase in *Kurnool South* was due to the closure of forests beyond Sim's line for sylvicultural reasons and in *Kistna* to the large number of cattle driven during floods into the closed areas of reserves.

### (*d*) *Protection against injuries from natural causes.*

20. The attack of Jacids on teak leaves remained local in Nugur Range in *Upper Gōdāvari* and the casuarina trees attacked by root fungus in *Gōdāvari Lower* in the Kandikuppa plantation were at once removed and sold.

## 4. Sylviculture. *

### (*a*) *Natural Reproduction.*

21. Reproduction of predominant species, such as Sal and Sahajo, etc., in *Ganjām* continued to be satisfactory in specially protected areas and was less noticeable elsewhere; of all the important species, such as teak, etc., good in *Gōdāvari Upper* and fairly satisfactory in *Gōdāvari Lower* where Teak, Kondathangedu, Yegisi and Nallamaddi seeded well; in *Vizagapatam* of Nallamaddi and Kondathangedu in Dharakonda and Sinivaram reserves Billu in Sarugudu and Kondathangedu in Karaka reserves abundant; in *Kistna* good in Bezwada Range and unburnt closed areas of Ellore Range; in *Kurnool East* in closed areas and in the freed areas of Gudem Range from bamboo weeds and shrubs, of Billu, some Yegi Tumki and Teak satisfactory; in *Kurnool South* of Yepi in both Nallamalais and Yerramalais good and Billu and teak bore seed; in *Kurnool West* of Yepi in Yerramalais good, excellent in protected forests of Gundlabrahmeswaram Range where Jittegi seeded profusely, but in the Terai and the pentas natural reproduction was generally deficient owing to fires and to trampling and to browzing by cattle. Reproduction from coppice shoots excellent in *Vizagapatam*, in Bezwada and Ellore Ranges of *Kistna* and in *Kurnool West*. Reproduction from root suckers were noticeable in *Gōdāvari Lower*, *Kurnool South* and *Kurnool West*. The reproduction of mangrove forests in *Gōdāvari Lower* and *Kistna* was, on the whole, fair. In *Kurnool West* in Pecheruvu Range hacked sandal trees reproduced themselves by root suckers. In *Gōdāvari Lower* the reproduction of bamboo was abundant.

### (*b*) *Artificial Reproduction.*

22. Form 75 shows the areas under plantation and topes or subject to cultural operations.

*Regular plantation.*—In *Gōdāvari Lower* and *Kistna* no planting work was done in the casuarina plantations as the reserves are shortly to be abandoned, but the previous year's plants were maintained. In *Kurnool East* no new plantations were started but in the existing five plantations of the Gudem Range casualties were filled up for which purpose small nurseries were maintained near each plantation which were looked after by Chentsu females and boys. In *Kurnool West* the teak plantations at Pecheruvu, Nagaluti, Bairluti, Pasurutla, Rudracode, Sudam, Pangidi and Honkaram were maintained, but extension of the plantations at Honkaram, Bairluti and Pecheruvu was stopped and 20 to 40 acres were planted with pure teak in each of the other five where the growth of teak is generally good and marked near streams and irrigation channels which indicates the necessity for regular and abundant watering during the year of planting. It is observed that the plantations are dependent upon the limited water-supply and cannot therefore be indefinitely extended. The method of liberation of the growing teak from the soft wooded species in these older areas has yet to be decided. At Pecheruvu it was found that sowing sandal in mounds and trenches is wrong as the hosts ought to be mature before the sandal is sown and the cost is out of all proportion to the results achieved. Work was therefore stopped at the end of the year and simple dibbling of sandal seeds round mature hosts combined with much more substantial fencing was substituted. Sandal seedlings are greedily devoured by deer and cattle in the hot weather and really efficient protection against both in the early stages is therefore necessary.

*Cultural operations.*—*Gōdāvari Upper*, most of the plants in the old plantations of Lakkavaram Range died and in the Marrigudem Range there were casualties of about 2 per cent. among the plants found surviving at the beginning of the year. *Kistna*, Sissoo, Red sanders and teak plants planted in Bendamcherla reserve proved a failure and very poor result attended the sowing of Yegi and teak seeds in the felled areas of Kondapalli and Kondur reserves Babul seed was sown in fenced areas in two different blocks in the Bandar Range and the plants were chriving well. An area of 100 acres in each of the Upputeru and Kanur reserves was sown broadcast with Mada and Thanduga seeds and the plants were doing well in the former, those in the latter withered in the summer.

* List of trees with their scientific names will be found in Appendix C.

(*c*) *Operations for the improvement of growing stock.*

23. Improvement felling thinning, coppicing, clear felling, cleaning and weeding and removing dead wood for the improvement of growing stock are detailed under exploitation.

*Creeper cutting*—was as usual carried by the subordinates in *Ganjām*, *Gōdāvari Lower* and partly in *Gōdāvari Upper* and creepers and thorny bushes were systematically removed in all the coupes prior to felling by contractors in *Kistna* and in *Kurnool West* creeper cutting in coupe 6 of Gundlabrahmeswaram Working Circle was done. In *Gōdāvari Lower* 219 acres were fenced, in *Kistna* four closed reserves were fenced with prickly pear on mounds, in *Kurnool East* bamboos and weeds were thinned out to help the natural growth of important seedlings and over an area of 4 acres in the Badvel reserve extension prickly pear was cut back by the patrolling gang to free the palmyra seedlings, and in *Kurnool West* bunding the head waters of the Gundlakamma river was carried out and more than 5 miles of line were stone walled in the Yerramalais.

(*d*) *Experiments.*

(i) On Species.

24. *Sandal—Ganjām.*—The sandal seedlings planted in Kontaipalli, Gundribadi and Kullada reserves were more or less a failure. *Vizagapatam*—32 plants were counted in the compound at Natavatam of which two were root suckers and two appeared to have come up naturally from seeds of other sandal trees, 162 seedlings were transplanted along the streams in the Dharakonda reserve and 15 plants in the Golgonda Range office compound are thriving well. Of the plants put down in the previous year in the compounds at Narasapatam, Sinivaram, Tadaparti and Kristnadevipeta a few only are surviving. No fresh plants were raised in the compound of the Conservator's office, Waltair, and the previous year's plants are mostly doing well; *Gōdāvari Lower*—the experiments with sandal were continued in many of the reserves of the Peddapur, Gokavaram and Rajahmundry Ranges, but was almost a complete failure; out of the seedlings obtained by sowings in the previous year 130 are surviving in the Dewancheruvu, Mallavaram and Tirumalayapalem reserves and in the Collector's office compound at Cocanada and these are in a very healthy condition. *Kistna*—the sandal plants already planted in different areas of the coupes in Kondapalli reserve of Bezwada Range are thriving well. *Kurnool East*—sandal seeds were sown by Gang subordinates in Chinaganapalli and by fire patrols in selected localities of Markapur and Morricheruvu ranges but the results were not at all encouraging. *Kurnool South*—seedlings were planted in all the ranges but without success.

*Mahogany.*—Nine mahogany trees in the Natavaram bungalow compound in *Vizagapatam*, are doing well.

*Red Sanders, Ganjām.*—Red sanders in Napier's Park continue to grow, *Vizagapatam*, out of the 135 plants which survived last year only 35 are now reported to be doing well. *Kurnool East* and *South*—experiments are tried as in the case of sandal with the same result except in Giddalore Range in the latter district where the seedlings were reported to be in good condition.

*Log Wood.*—The log wood plants in the Kandikuppa plantation in *Gōdāvari Lower* obtained from the sowings made in 1903 are reported to be unhealthy and the trees in the Conservator's compound at Waltair are doing well.

*Divi Divi.*—Trees in Edugurallapalli, Singaram and Tunikicheruvu bungalow compound in *Gōdāvari Upper* are doing well.

*Rubber*—(1) *Para*: *Vizagapatam.*—The few rubber plants in the compound of the rest-house at Sinivaram are thriving well and out of 41 rubber plants surviving at Pandirimamidi at the close of the previous year 8 died, leaving 33 at the close of the year.

(2) *Ceara.*—The condition of ceara rubber trees at Osurabonda in *Ganjām* continue to be satisfactory.

*Edible date, Gōdāvari Upper.*—The oldest in the Murmur bungalow compound is thriving well. The two date trees in front of Kunavaram rest-house are doing well.

*Loquat*, *Apple*, *Litchi* and *Mango* plants in *Vizagapatam* are thriving well.

*Eucalyptus*.—Three plants in the Golgonda Range office compound in *Vizagapatam* are thriving well.

*Pinus longifolia*.—Out of 470 seedlings surviving in the Sinivaram rest-house compound in *Vizagapatam* at the beginning of the year 56 died, leaving 414 at the close of the year.

(ii) Other Points.

(*a*) *Lac inoculation*, *Kurnool West*.—The trees of *Butea frondosa*, *Zizyphus Jujuba* and *Schleichera trijuga* were inoculated in Bairluti, Pecheruvu, Pangidi and Gundlabrahmeswaram Ranges and the stick lac for this purpose was obtained from Dhamtari in the Jaipur division in the Central Provinces.

*Mulberry*.—Cultivation was started at Bairluti and Pecheruvu in *Kurnool West*.

These two above experiments were undertaken principally with the object of providing permanent work for the Chentsus in the shape of lac and silk cultivation.

(*b*) *Test of annual increment*.—In *Gōdāvari Lower* with a view to determine the quantity of annual growth five sample plots, 1 acre each, were taken in the portion worked out in the Marlagudem reserve, Polavaram Range, and they were clear felled and the results recorded.

## 5. Exploitation.

### (*a*) *System of Management.*

25. The total area for which regular working plans were sanctioned was 2,094 square miles and the area dealt with under different sylvicultural systems are detailed below:—

| Sylvicultural system. | Area in sq. mls. | Per cent. |
|---|---|---|
| (1) Clear felling ... ... ... ... ... ... | 148 | 7·10 |
| (2) Selection felling ... ... ... ... ... | 438 | 21·10 |
| (3) Simple coppice felling ... ... ... ... ... | 35 | 1·70 |
| (4) Coppice with standard felling ... ... ... ... | 285 | 13·70 |
| (5) Improvement felling (mostly selection) ... ... | 107* | 5·20 |
| (6) Unworked areas ... ... ... ... ... | 1,081 | 51·20 |
| Total ... | 2,094 | 100 |

(i) Major Forest Produce.

(1) *Clear or Regeneration Fellings.*

26. Thirty-eight acres in the Kandikuppa plantation were clear felled with a view to disafforestation in *Gōdāvari Lower*, two coupes in Bezwada, two in Ellore and four in Bandar ranges in *Kistna* and the areas to be planted in the regular plantations in *Kurnool West* were treated under this system.

(2) *Selection Fellings.*

27. Twenty sal trees over $7\frac{1}{2}$ feet in girth were felled in *Ganjām* and 1,845 dead and dying sal trees were selected in the same district and felled. The indent system for the disposal of the most valuable species in unreserves in the same district has been in force for seven years and the demand for the timber under this system is increasing by leaps and bounds. The windfallen sal timber from Donibai and Somaralle reserves in *Vizagapatam* was brought down to depôts and sold. Thirty-three acres in three reserves of Bandar range in *Kistna* were treated under this system. A palmyra coupe of 150 matured trees in the Badvi reserve in *Kurnool East* was leased out to contractor during the year and the trees to be felled were selected by the Range officer and marked previously. In *Kurnool South* in Owk palmyra extension selected dead and dying trees were marked and removed under the provisions of the working plan. In *Kurnool West* selection working in improvement fellings was carried out in the Gundlabrahmeswaram working circle and dead timber from the hill forests was removed under this system.

(3) *Regular Thinnings.*

28. One compartment in *Gōdāvari Lower* was thinned and in *Kurnool East* and *Kurnool West* bamboos in the blocks leased out to contractors were removed under this system, but the operation in the former district had to be given up being very expensive.

* Coppice with standard also was worked on 44 square miles.

(4) *Improvement Fellings.*

29. In *Ganjām* five bamboo coupes in Gumsoor and two in Berhampore were treated, the cleaning of stumps being done simultaneously with the extraction leaving four to eight culms per clump. In *Gōdāvari Lower*, besides 38 acres of compartment XI of Kandikuppa plantation which were cleaned, operations were conducted in five reserves where dead wood and bamboos were leased out to contractors with a view to improving the growing stock. The right to fell and remove bamboos from compartments XV to XVII and coupe II of series I and II of Kondur in *Kistna* were leased out to contractors. In *Kurnool East* only dead trees and tamarind trees past the age of bearing fruits in a coupe were sold to a contractor and the Chentsus prepared agricultural implements, spokes and felloes from dead and dying yepi, yegi, and teak trees.

(5) *Coppice with Standards.*

30. Six fuel coupes in *Ganjām*, 418 acres in *Vizagapatam*, five coupes of 606 acres in the Coringa reserve in *Gōdāvari Lower* and 675 acres in Kondapalli reserve in *Kistna* were worked under this system.

(6) *Simple Coppice.*

31. *Gōdāvari Lower.*—Four fuel coupes in the Peddapur, four in the Rajahmundry (including coupes A-5 and B-5 of the Kandikuppa reserve under working plans area 584 acres) and two in the Polavaram ranges were treated under simple coppice.

(7) *Unregulated Fellings.*

32. In *Vizagapatam* permits for timber, fuel, and bamboos were issued for removal from unreserves and felling of yegisi and nallamaddi was allowed on part contract in a portion of the Bointi unreserve. Bamboos were allowed to be removed from located coupes in the Golgonda range. In *Gōdāvari Upper* the right of cutting bamboos from Marrigudem, Pulusumamidi and Lakkavaram ranges was leased out for Rs. 9,050 while removal of timber was not leased out during the year. Unregulated fellings were confined to Rampa in *Gōdāvari Lower* and to certain unreserves under the control of the Forest department and the mada fuel from the Hope Island which forms part of the Coringa extension proposed reserve was as usual removed on permits issued by the Marine department. As usual permits were granted only for palmyra trees and minor produce such as thorns, stones, manure leaves, etc.

(ii) Minor Forest Produce.

(1) *Miscellaneous Produce.*

33. In all districts seigniorage was collected on gravel, earth and other minerals. The usufruct of mango, tamarind, and other fruit trees was sold in auction; the collection of tangedu and other barks, honey, wax, myrabolams, hides, horns, etc., was leased out. The chief deviations were:—In *Ganjām* the emjoyment of the fruits in the majority of cases was left free for the Khonds and mahowa seeds were collected and sold with the balance of previous year's stock. No kamela powder was collected as there was great uncertainty as to prices and difficulty in selling it at all. In *Vizagapatam* seigniorage was collected from purchasers from hillmen at weekly markets except in Palgonda range where all the minor forest produce except the grass in Chinnamangalapuram tope which was leased out to a contractor was removed by purchasers on permits. In *Gōdāvari Lower* permits were as usual issued for all minor produce removed from Rampa as well as from the Agency division of Polavaram and Yellavaram. In *Kurnool East* and *Kurnool West* tamarind, soapnuts, myrabolams, mushti seeds, wax, horns and honey were collected departmentally through the Chentsus and were sold by auction.

(2) *Extraction of Fodder.*

34. In *Gōdāvari Lower* the right to cut and remove fodder and thatch grass in the Coringa reserve was leased out as well as fodder grass from closed areas in *Kistna*. In the three *Kurnools* removal of grass free in head-loads and on payment for cart-loads was continued, but in *Kurnool South* removal in cart-loads of grass was allowed in all the ranges for one and-a-half months except in Sirvel range because of frequent illicit removals of forest produce on a large scale.

(3) *Hay-making.*

35. No operations were undertaken except in *Kurnool South* where fodder grass was collected for feeding Government bulls in the hot weather.

(4) *Grazing.*

36. The permit system was in force in all the districts. The revenue derived was Rs. 1,20,040 against Rs. 1,24,742 in the previous year and the fall is attributable: in *Kistna* to the abolition of parcellaire system, closure of all reserves to goat browsing, closure to all animals of half the forests in Bezwada and Ellore ranges under the provisions of working plan and to some reserves having been disafforested and some placed under Panchayat management; in *Kurnool East* due to less number of cattle that resorted to the pentas of the Rachakonda range on account of water difficulty; in *Kurnool South* to the exclusion of foreign cattle and to grazing being prohibited beyond Sim's line for sylvicultural reasons.

(*b*) *Agency of Exploitation.*

(i) GOVERNMENT.

37. Forms 76 and 77 show separately the different classes of produce collected and Form 78 the stock disposed of and the balance remaining. The total quantity of timber and fuel and the value of bamboos and minor forest produce extracted departmentally were: 14·49, 6·49, and 5·05 per cent. of their respective total outturn through all agencies, and the total value of the disposals was Rs. 1,13,275 against Rs. 1,35,120 in the previous year. The fall was due to leaving the removals to a greater extent to contractors. Transport was as usual. The quantity of timber, fuel and the number of bamboos extracted was 250,028 cubic feet, 868,935 cubic feet and 351,783 against 280,305 cubic feet, 1,459,059 cubic feet and 582,151 respectively in the previous year. The fall is due to substitution of contract for departmental agency. Minor produce collected was 32,103 maunds against 89,509 in the previous year. The fall is due to no kamala powder having been collected in *Ganjām* on account of uncertainty of demand in European markets and in *Kurnool East* to total failure of soapnut crop.

(ii) PURCHASERS.

38. There has been marked increase in the removals by purchasers under all the major heads except timber due to general lack of demand. Driftwood was sold in auction in *Gōdāvari Lower* and *Gōdāvari Upper.*

(iii) & (iv) RIGHT AND PRIVILEGE HOLDERS AND FREE GRANTEES

39. The following statement shows the estimated quantity and value of produce removed under the above heads:—

| Agency. | Timber. | | Fuel. | | Bamboos. | Minor produce. | Grazing. | Total. | Value in the previous year. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Value. | Value. | Value. | Value. | |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right and privilege holders. | 184,136 | 4,717 | 582,195 | 5,867 | 552 | 23,570 | 1,079 | 35,785 | 36,965 |
| Free grantees .. .. | 86,853 | 3,688 | .. | .. | 671 | 2,820 | 16 | 7,195 | 8 075 |

(*c*) *Outturn and Sources of Forest Produce.*

| Agency. | Timber in cubic feet including sandalwood. | | Fuel in cubic feet. | | Bamboos in value in rupees. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| Government .. .. | 280,305 | 250,028 | 1,459,059 | 868,935 | 10,317 | 6,550 | 10,750 | 12,844 |
| Purchasers (including confiscation). | 1,813,968 | 1,288,226 | 3,877,747 | 4,459,851 | 61,539 | 93,180 | 243,438 | 213,695 |
| Right holders .. .. | 189,507 | 184,136 | 792,444 | 582,195 | 330 | 552 | 24,649 | 24,649 |
| Free grantees .. .. | 48,304 | 86,853 | .. | .. | 454 | 671 | 78 | 2,836 |
| Total .. | 2,332,084 | 1,809,243 | 6,129,250 | 5,910,981 | 72,640 | 1,00,953 | 2,78,915 | 2,54,024 |

40. The variations have been explained where necessary. The rates for grazing fees levied in the several districts are shown in Form No. 74. The number of animals licensed to grazing on permit was 866,732 against 629,218 in the previous year.

## CHAPTER III.—FINANCIAL RESULTS.

41. The financial results compared with those of last year and the average of the five preceding years show a net decrease of Rs. 6,155 and increase of Rs. 1,46,252 respectively—

| Items. | 1914-15 | 1913-14. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 7,70,393 | 7,78,973 | 7,69,647 |
| Expenditure "A. Conservancy and Works" inclusive of "Refunds" | 3,33,624 | 3,73,394 | 5,24,383 |
| "B. Establishments" .. .. | 3,97,866 | 3,60,521 | 3,52,613 |
| Total expenditure .. .. .. | 7,31,490 | 7,33,915 | 8,76,996 |
| Net results .. .. .. .. | + 38,903 | + 45,058 | — 1,07,349 |

The gross receipts were less than those of the previous year and more than the average by Rs. 8,580 and Rs. 746 respectively.

The expenditure under "A. Conservancy and Works" including refunds is less than that of the previous year and the average by Rs. 39,770 and Rs. 1,90,759 respectively. The net results show an increase of Rs. 38,903 which is due chiefly to the change of system from departmental to contract working.

The above figures do not show the true working of the year and the revenue is solely interest on our capital whilst the expenditure under "A. Conservancy and Works" show large amounts for capital expenditure; and a true balance sheet should merely show the interest on that capital. Working it out in this manner the following results are far more accurate:—

| | Rs. | Rs. |
|---|---|---|
| Total revenue for the forest year ending with 30th June 1915... | | ... 7,70,393 |
| *Expenditure.* | | |
| A. "Conservancy and Works" ... ... ... | | ... 3,23,310 |
| *Deduct* all capital expenditure as per details given below:— | | |
| A VI-c Rs. 13,939 less 10 per cent. for repairs, Rs. 1,393... ... ... ... ... ... | 12,546 | |
| A VII-a ... ... ... ... ... ... | 32,333 | |
| A VII-b ... ... ... ... ... ... | 13,210 | |
| A VII-c ... ... ... ... ... ... | 2,132 | |
| A VIII-a ... ... ... ... ... | 7,426 | |
| A VIII e Rs. 41,850 less establishment charges Rs. 3,576... ... ... .. ... ... | 38,274 | |
| A VIII-f ... ... ... ... ... ... | 18,074 | |
| A VIII-g Rs. 12,787 less establishment charges Rs. 4,032 ... ... ... ... ... ... | 8,831 | |
| | | 1,32,826 |
| Balance ... | | 1,90,484 |
| Add 4 per cent. interest on "Capital" expenditure of Rs. 1,32,826. | | 5,313 |
| B. "Establishment" ... ... ... ... ... ... | | 3,97,866 |
| | | 5,93,663 |
| Surplus ... | | 1,76,730 |

It will be seen herefrom that the true working of the year should show a surplus of Rs. 1,76,730 and not Rs. 38,976 only. The total receipts and expenditure for the year fell by 1·15 and ·41 per cent. respectively.

About 44 per cent. of the expenditure was devoted to the upkeep and improvement of the forests and 56 per cent. to exploitation, etc.

The outstanding revenue at the beginning of the year was Rs. 65,184 and the value of the sales amounted to Rs. 7,83,452. Out of the total of Rs. 8,48,636, Rs. 7,70,813 were collected leaving an outstanding balance of Rs. 77,823 at the close of the year.

RECEIPTS.

(i) *By Departmental Agency.*

*Timber.*—Rs. 3,287 due to want of demand for Rampa timber in *Gōdāvari Lower*; less timber found on Sim's line and excess collection in the previous year from a contractor in *Kurnool West.*

*Fuel.*— —Rs. 17,247 due to the inferior quality of fuel extracted in *Gōdāvari Lower.*

*Bamboos.*— +Rs. 4,180 due to rest having been given to certain coupes in *West.*

*Minor produce.*— +Rs. 2,869 due to sale of seeds in *Gōdāvari Upper* to Kallikota Estate and to the sale of previous years' stock in Gōdāvari Lower.

(ii) *By Purchasers.*

*Timber.*— —Rs. 22,664 due to discontinuance of timber contracts in *Gōdāvari Upper.*

*Fuel.*— +Rs. 46,560 due to sale of Agustinowgam plantation better prices obtained for larger number of coupes in *Ganjām*, to the larger demand by the Public Works Department, in connection with the execution of works in their charge in *Gōdāvari Upper* and to sale of Bendamurlanka plantation in *Gōdāvari Lower.*

*Bamboos.*+Rs. 20,792 due to better prices obtained in *Ganjām and Gōdāvari Upper* and to larger removals and increased seigniorage rates on bamboos from Rampa in *Gōdāvari Lower*

*Grazing fodder grass.*— —Rs. 4,70 due to the discontinuance of the issue of permits to Rankuhanumanthapuram reserve as it was under contemplation to disafforest it.

*Other produce.*— —Rs. 23,434 due to poor harvest in *Gōdāvari Lower*, abolition of commutation fees in *Gōdāvari Upper*, to advance collection in 1913-14 the tangedu bark lease amount of 1914-15 in *Kurnool West* and to the adjustment of Rs. 8,033 under II-(f) in March 1915, final account sent by the Accountant-General.

(iii) *Miscellaneous (including confiscated drift and waifwood).*

*Revenue.*— —Rs. 3,297 due to the abolition of the leasing system of driftwood groups in *Gōdāvari Lower.*

EXPENDITURE.

*A. Conservancy and Works.*

The total expenditure was less than that of the previous year by Rs. 41,756 and was chiefly due to leasing of more coupes to contractors, curtailing of expenditure on capital works and to abandonment of cultural operations.

*B. Establishment.*

The increase of Rs. 37,345 was due to earning by Imperial and Provincial officers increments under the time-scale pay, to the debit of the cost of special establishment for selection of blocks in Rampa country in *Gōdāvari Lower* and for preparing a scheme for the Chentsus in *Kurnool West.*

## CHAPTER IV.—ADMINISTRATION.

42. *New District Forest charges.*—There were no changes during the year.

43. *New ranges.*—No new ranges were formed but revision of boundaries of some ranges *of Kurnool West* was made.

44. *Conduct of establishment—Executive staff.*—This was on the whole satisfactory and special mention has to be made of the good work of Rangers N. S. Anantacharlu, K. G. Belliappa, S. Ramaswami Ayyar, Alur Kristna Rao, R. Veeraswami Nayudu, N. L. Narasimham, K. P. Benjamin, H. Rama Rao, Hussain Khan, C. G. Ganapathi, G. J. David and C. S. King and of Deputy Rangers K. Tiruvenkatachari, N. Chakrapani Ayyangar, S. Siviah, T. G. Venunatha Rao, Sankaram and A. Sita Rama Rao. The following were punished for bad work :—two Rangers were reduced, two Deputy Rangers were dismissed and six Deputy Rangers suspended.

*Protective staff.*—The work and conduct of this branch is found to improve after training given in the Vernacular Training schools; but the list of punishments continues to be long. One Forest Guard and two Watchers were convicted; one forester, two forest guards, five watchers and two tannahdars, were dismissed; one forester, 21 forest guards, 45 watchers, three tannahdars, two permit gumastahs and one gardener were removed; nine foresters and two forest guards were reduced; 24 forest guards, 21 watchers one permit gumastah, one coupe gumastah, four tannahdars and one gardener were suspended and three forest guards and one tannahdar resigned.

*Ministerial staff.*—Its work and conduct as a whole was satisfactory. Two Range clerks and three Range peons were dismissed, one District Forest officer's clerk and two Range clerks were reduced, one Range clerk was suspended and one Range clerk resigned.

45. *Health of establishment and casualties.*—The health or establishment was bad as usual and notoriously so in *Ganjām* and *Gōdāvari Upper*. The ailments generally were from malaria and spleen and to some extent cholera, small-pox and guinea worm. A dispensary was opened at Gazilabadi, the head-quarters of Pondakhol (Agency) Range in *Ganjām* district. A large number of subordinates went on sick leave and about 20 of the inferior service resigned owing to ill-health. One clerk of the District Forest office *Ganjām*, died of blackwater fever; and one peon of his, one forest guard of *Vizagapatam*, one accountant of *Gōdāvari Upper*, one surveyor and one watcher of *Gōdāvari Lower*, the Head clerk of the District Forest office, one forester and one watcher of *Kistna* two foresters, one forest guard, one Plantation Overseer, one gardener and one Range clerk of *Kurnool West* died of malarial fever and one Range clerk of *Kistna* from cholera.

46. *Relation between Revenue and Forest officials.*—This continued to be cordial but for a small friction in *Kurnool West* between the Ranger and the Tahsildar over the preparation of certain returns in the Taluk office.

47. *Service books.*—These were maintained and verified in all districts.

48. *Tours of Forest Member.*—The Hon'ble Mr. R. C. C. Carr toured in the forests of three *Kurnools* and his successor the Hon'ble Mr. H. F. W. Gillman *in Kurnool East and South.*

*Tour of the Conservator.*—Mr. A. W. Lushington was in charge of the Circle throughout the year and toured for 213 days visiting all the forests and inspecting all the District Forest offices. He toured also in estate forests of Jeypore, Modgole and Vizianagram to give advice.

*Tours of District Forest Officers.*—All the District Forest officers but Mr. Murray toured more than the prescribed period and the short tour of Mr. Murray was due to his indifferent health. Mr. Seager of Gōdāvari Lower had to spend over three months in Bampa in connection with the selection and survey of blocks in that area.

*Inspection of Range offices.*—All the range offices were inspected during the year.

*Audit of accounts of District Forest offices.*—The accounts of 1914–15 of all the District Forest offices except *Kurnool East* and *West* have been inspected by the Auditors from the Accountant-General's office and reported to be satisfactory; in *Kurnool East* and *West* accounts up to 1913–14 alone were inspected and reported as satisfactory.

*Forest College, Dehra Dun.*—One probationer for Provincial service, sent to this Circle for practical training, joined the College after undergoing training in *Kurnool East* successfully.

49. *The Madras Forest College.*—As in the previous year six Government students were deputed to the ranger's course commencing from 1st August 1915. One private student attached to this Circle for practical training joined the College after successfully passing through the course in *Kurnool South.* The four that returned this year from the College have all obtained higher standard certificates and of them J. A. Paul D'Cruz won the Brazier Prize. Out of the six students sent for 1914–16 course one was sent back as unfit to follow the course.

*Vernacular Training School for Foresters and Forest Guards.*—Owing to lack of facilities in former years few Uriya candidates had the advantage of being trained; during the year under report ranger S. Ramaswami Ayyar who was long in *Ganjām* and knows Uriya well was selected as Senior Instructor and given the assistance of A. J. M. Snaize as Junior Instructor. Twenty-eight students of whom ten were Uriya forest guards were sent up, six students had to be withdrawn, one on account of a serious accident and the rest owing to protracted illness; out of the remaining 22 six passed in the first class, seven in the second class, and nine in the third class. Ten out of the 22 successful candidates were the Uriya speaking men from *Ganjām.*

50. *Work and service of Superior officers.*—The following Collectors have commended the work of their District Forest officers to the following effect:—

*Ganjām.*—Mr. Minchin has shown conspicuous tact and energy in all branches of the work. Mr. G. S. Ladrado's work both as District Forest officer and Extra Assistant Conservator has been excellent and his knowledge of building and road-making has been of the greatest assistance to the District Forest officer.

*Gōdāvari Lower.*—Mr. Elwin has expressed his continued satisfaction with the work of Mr. Seager and his appreciation of his work in Rampa.

*Kurnool.*—Mr. Clear and his Assistant Mr. Stracey have done good work; Mr. Thompson has worked hard and conscientiously; Mr. K. G. Belliappa Extra Assistant Conservator on probation, worked hard.

The Conservator has nothing to complain of in the work of any of the Divisional officers; all have worked well, and Mr. Rigold appears to have gained the confidence of the Koyas, who are beginning to turn out some useful work, in the *Upper Gōdāvari.* Mr. Murray, after three years extension, has now retired from *Vizagapatam.*

51. *List of Vernacular names of trees.*—This has been published.

## CHAPTER V.—GENERAL.

### (*a*) Rules under the Forest Act.

52. *Timber Transit Rules.*—(i) These rules everywhere worked satisfactorily; they were revised for *Ganjām* and found to work well; in *Vizagapatam* they are now better understood and worked: the location of a Tana was shifted to a more advantageous position and cases show a tendency to fall; in *Gōdāvari Lower* the checking offices at Polavaram and Kotilingala were placed under Deputy Rangers; *in Kistna* the Tana stations and schedules were revised and *in Kurnool West* the rules were extended to Yerramalais ranges which, besides being helpful to ryots in preserving their own timber, are reported to have stopped already stealthy removals under cover of spurious permits granted by village officers and Jaghirdars.

(ii) *Rules under section 26 of the Forest Act.*—The privileges allowed by these rules were generally availed of by the people and no complaints or abuses of any kind were brought to notice except from *Ganjām* where a serious abuse in connection with the valuation of tree growth on darkhast land was detected and the Deputy Ranger concerned was dismissed and from *Kurnool West* where it is said that in the Yerramalai ranges a tendency exists to steadily denude the unreserves for carrying on a regular trade in timber and fuel. Rules for the management of forests and waste lands in Pondakhol mutta of the *Ganjām* Agency were sanctioned by Government and published. The special darkhast rules in force in that district have been cancelled as circumstances have changed.

(iii) *Rules framed for the collection and disposal of drift wood.*—Under the orders of the Board the revision of the rules in the light of the suggestions made by the Honourable the Advocate-General is under correspondence. The leasing system has been abolished and the work is at present being attempted by Departmental Agency with the assistance of village officers.

(iv) *Rules for the guidance of Forest officers in compounding Forest offences.*—The rules worked smoothly and well except for a case in *Ganjām* where a Deputy Ranger was severely beaten in the execution of his duty in this direction and the case is *sub judice*; in *Kurnool West* the time-limit for the payment of compounding fees was in many cases exceeded.

(v) *Rules framed under the Forest Act for private forests*.—These worked smoothly and without complaint In Malkangiri, part of Jeypore estate, more activity appeared in detecting and prosecuting cases; as the number was unusual a special enquiry by the Deputy Tahsildar of the place was instituted but his report contained misstatement of facts and the Revenue Divisional Officer was of opinion that local enquiry during tours would be more advantageous than judicial enquiry. The forest rules were extended during the year to Kurupam, Peddamerangi and Chinnamerangi estates. Selection of areas for reservation was begun and lists of proposed forest blocks in Peddamerangi and Chinnamerangi were sent to the Zamindars concerned for opinion, in the Kurupam estate survey of one block was completed and proposals made for its reservation. The control and management of Madgole forests was transferred to the Court of Wards during the year and application has been made for the extension of these rules to them.

(*b*) SUPPLY OF FOREST PRODUCE TO MEET THE WANTS OF THE PEOPLE.

53. (i) *Coupe and Depot system.*—The efforts of the department are always being directed towards meeting the local wants of the people. While the cutting, collection and sale of timber fuel and bamboos was being transferred to private individuals every endeavour is being made to encourage those individuals to effect retail sales in the same way as formerly in Government depots. There were no complaints from the public against the contract system or want of produce except from *Kurnool West* where owing to the inexperience of the contractors the demand for agricultural implements was not fully met with. The permit system is not in force except for grazing and removal of minor forest produce. In *Vizagapatam* however permits were issued for all produce on unreserved areas and for bamboos in Dharakonda and Siniyaram reserves. Timber, fuel and bamboos are being generally sold now in coupes standing. In *Gōdāvari Upper*, people obtain ample supplies of fuel and small timber from the unreserves and in Bhadrachellam taluk in particular the inhabitants are allowed to remove classified and unclassified timber from unreserves free of cost for domestic and agricultural purposes; this concession is restricted in the case of Nugur taluk to only unclassified trees. In *Gōdāvari Lower* the working of mangrove areas in the Kandikuppa and the Coringa reserves for supply of fuel to fishermen at fixed rates has been continued. In *Kurnool East* the demand for timber and agricultural implements was generally met from the grazing lines cut in all the ranges, more than 300 sets of spokes and felloes were made out of dead teak and yegi trees by Chentsus in the Gudem Range and sold to contractors at fixed rates, agricultural implements made from dead and dying yepi trees by the Chentsus of Dornal Range were also sold to the public at fixed rates. Fuel which resulted from cutting fire lines was offered for sale but none would purchase as the villagers have their full supply from unreserves. In *Kurnool South*, in order to introduce healthy competition amongst contractors short lengths (2 to 5 miles) of fire lines were sold for the small capitalists to remove the produce thereon and sell to the public. In *Kurnool West* difficulty of transport was experienced and it is under contemplation to purchase some boats to carry forest produce on the Kurnool-Cuddapah canal.

54. *Free removal of grass.*—This was permitted in *Vizagapatam*, *Gōdāvari Lower*, *Kistna*, and thre, *Kurnools*, and was freely availed of by the ryots. No instance of abuse was brought to light.

55. *Hill tribes.*—In *Ganjām* the assistance practically of all the Khonds living adjacent to or inside of reserves was taken in fire and general protection of forests. The Pondakhol Khonds are becoming used to forest departmental works. They are given rewards for successful fire protection; Gumsur Khonds were given for such services concessions such as timber for ploughs, bamboos and thatching grass for repairing their houses, fuel and minor produce for their own use. In *Vizagapatam* care was taken to avoid giving the hillmen cause for complaint against the working

of the forest laws so long as they did not abuse the privileges given to them. The villagers of Kondasantha failed to render assistance in extinguishing forest fires and burnt an area of about 3,000 acres in consequence of which their privilege of grazing 200 head of cattle in the Sinivaram reserve was suspended. In *Godāvari Upper* the Koyas and the Reddis did good work in clearing fire lines and in general protection of forests. Special rewards for successful fire protection in Bhadrachellam and Nugur taluks were distributed in person by the District Forest officer and his Gazetted Assistant. In *Gōdāvari Lower* the Koyas and Reddis of Polavaram and Yellavaram divisions rendered good service in the matter of fire and general protection of forests; their services were also utilized in road and building works for which they were not only liberally rewarded but were allowed several concessions In *Kurnool East* the Chentsus rendered satisfactory assistance in putting out fires for which the Board was pleased to sanction the free distribution of cloths worth Rs. 1,162. This reward was distributed in proportion to the area of the forest successfully fire protected during the previous fire season and when the value of the cloths supplied exceeded the reward amount the difference was recovered when payment was made for work subsequently done. The Chentsus were employed on works such as collection of minor forest produce, line cutting, fire protection, preparing agricultural implements, cutting back bamboos, fashioning line timber, bunding up vagus, on bridle paths and construction of foot-paths. A start has also been made in one of the worst gudems (Chilakacherla) in the work of splitting bamboos and the results obtained, so far, is sufficient to make one hope that this industry can be gradually extended to several other gudems where the bamboos grow in profusion. There being an extensive demand for bamboos splits it will always be possible to sell the produce at a handsome profit on the spot. In *Kurnool South* the Chentsus at Ahobilam were employed in fire protection works and weeding operations. All the able bodied Chentsus at Ahobilam, Baireni and Mahanandi are employed as fire patrols in the Department. In *Kurnool West* the Chentsus were employed on the teak and sandal plantations in the collection of minor forest produce and in fire protection operations. The teak plantations are likely to come to a close for want of water for irrigation and efforts have been made to train the Chentsus in elementary road work while lac and mulberry cultivation has been started with a view to divert their attention to some useful and permanent occupation. They are generally too lazy to grow field crops which is fortunate from a forest point of view, otherwise a merciless felling of trees for podu cultivation as in the Circars would have denuded the forests. The Chentsus show signs of becoming amenable to discipline and it is hoped that the rigorous development of elementary education of the children will make the rising generation still more tractable. They are by no means inefficient at simple forest work and when put on to contract work they develop surprising energy in order to get away and have their afternoons free. The bunding of jungle streams by rough stone dams has been started, and there is an unlimited supply of this useful though not immediately remunerative work, it is remarkable how quickly and how well they will do this work when they know that a fixed price will be paid for each bund. During the year Government appointed Mr. Hood, I.C.S., to be a special officer for Chentsus for six months from January to July 1915. He visited a good number of the gudems in all the three divisions and is said to have submitted a report on the subject.

56. *Cultivation in reserved forests.*—In *Ganjām* some Khond families of Kumbharibadi (Chinnakimidy Maliahs) have been settled on certain old wet lands in the north-west corner of Pondakhol reserve as sufficient other hands were not available for forest purposes. In *Vizagapatam* the lease of the area in Chintapalli reserve was renewed and on resurvey the area was found to be 57·50 acres and the lessee was charged with the assessment on the excess area of 2·50 acres. In *Kurnool East* an extent of 65·25 acres was granted free of assessment to the Chentsus of Maddipenta, Peddachama, Chintala, Marripalem, Peddamantrala, Chinnamantrala and Murikimallapenta at ·25 per each family besides the area of 111 acres 47 cents which was given to the Chentsus of Garapenta and Chennapalempenta on annual assessment of two annas an acre. The above grants were on condition of helping the Forest department in extinguishing forest fires. In *Kurnool South* four acres of land was assigned to the Police metta talayaries at Payalakanama metta as an exchange for

services rendered to the Police department. In *Kurnool West* the lease of 74 acres in the Gadedamadugu reserve * on the temporary annual lease system was continued. This land will probably be thrown out of reservation and put up to auction.

57. *Mining and Prospecting.*—In *Kurnool South* the 30 years license for prospecting for diamonds in Ramavaram reserve granted to Mr. A. Ghose remained unworked during the year; in *Kurnool West* mining leases for 30 years were granted to Messrs. A. Ghose and Charles Jambon for lead ores, to Mr. A. Ghose for diamonds and to Messrs. Beardsell & Co, Madras, for barytes. Two licenses for prospecting for diamonds were also granted to Mr. A. Ghose.

58. *Realization of revenue from the usufruct of toddy-yielding trees on Government waste and poramboke lands.*—The revenue realized was in *Ganjam* (Rs. 1,611), *Vizagapatam* (Rs. 576), *Gōdāvari Lower* (Rs. 4,713), *Kistna* (Rs. 7,729), *Kurnool East* (Rs. 1,212), *Kurnool South* (Rs. 2,335), and *Kurnool West* (Rs. 13,774).

### (*c*) Live and Dead Stock.

59. *Live stock*—(*a*) *Elephants.*—All the elephants in the Circle except one in *Ganjām* and one in *Kurnool West* kept good health during the year; the one in *Ganjām* was ordered to be sent to Thippakadu in the Western Circle, for recruiting health in congenial surroundings and in its place a good working elephant was ordered to be supplied from that Circle; the elephant in *Kurnool West* was laid up with an ulcer for some time but recovered A second elephant "Kapila" was supplied to *Gōdāvari Upper* from the Western Circle.

(*b*) *Bullocks.*—The departmental collection of timber and fuel having been stopped 10 pairs were transferred from *Kurnool South* to *Kurnool West* and these are now employed in carrying provision for subordinates and departmental shops and are hired to forest contractors for carting materials to work spots and to Government officers on tour for the carriage of their saman. They will be employed largely in the construction of new roads and buildings Out of the ten bulls remaining in *Kurnool South* one has to be sold being very old and one out of the 20 supplied to *Kurnool West* was killed by tiger; in its place a new one was purchased for Rs. 50.

*Inventory of valuable stock.*—The stock registers were maintained and verified in all the districts. The unserviceable monorail in *Gōdāvari Lower* was sold to the Coromandel Company for Rs. 500 during the year.

*Rain gauges.*—These are in all the districts and the readings were properly recorded, *vide* Appendix D. The rain gauge at Bendamurlanka in *Gōdāvari Lower* got out of order and has been sent for repair. Two new stations in *Kurnool South* at Sandrapodu and Chintalapalli were sanctioned during the year but not yet constructed.

### (*d*) Suits.

60. In *Gōdāvari Upper* a late contractor has given notice of suit, in *Gōdāvari Lower* the appeal regarding the Coringa (proposed reserve) extension is still pending before the Privy Council and the suit brought by M. Subba Rao for Rs. 800 against the Forest department has been decided in favour of Government. In *Kurnool West* one G. Seshiah of Atmakur gave notice that if the value of timber purchased by him but not handed over were not refunded to him he would institute a suit, the matter is under correspondence.

61. *Classification of reserves under orders of Government on the Forest Committee's report.*—In *Ganjām* as a result of the classification seven small and useless reserves were proposed for disafforestation. Arrangements are being made to hand over 2 class IV reserves to panchayat management; the people concerned show interest in the affair and the attempt seems to meet with success. In *Gōdāvari Upper* all the reserves have been classified and orders of the Board awaited. No forests in this district need panchyat management. In *Gōdāvari Lower* the proposals sent were returned for revision and have recently been resubmitted. In *Kistna* the classification has been approved by the Board This was the only district in this Circle where panchayat

* Granted to the Christians of Gadethemadugu village.

management has been tried. Of the five reserves Gudemetla, Balasupadu, Gandrayi of Bezwada Range and Chintalapudi and Velagalapalli in Ellore Range handed over to the panchayat the working in the former three was reported to be satisfactory and in the latter two fairly so. In *Kurnool South* the proposals are under consideration of the Collector.

62. *Improvement of water-supply and grazing facilities in Government grazing grounds.*—In *Gōdāvari Lower* several estimates have been sanctioned-works taken on hand to improve water-supply; and in *Kurnool South* two kuntas in the grazing grounds of Owk Range were repaired during the year. The other reports are silent on this point.

63. *Opening small fuel coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—In *Gōdāvari Lower* no necessity has arisen as there is enough of waste lands to meet all such demands; in *Kurnool South* small coupes in grazing areas are being marked for sale, and also standing materials on fire lines to be widened or newly cleared have been sold in small lots in Chelama Giddalur and Sirvel Ranges to meet such demand.

64. *Gang system.*—The system is being introduced everywhere in the Circle and the result of the working will have to be watched. Want of sufficient establishment for successful working is already felt in some districts; the proposed reorganization of the executive and protective staff will, it is hoped, relieve the strain.

OFFICE OF THE CONSERVATOR OF FORESTS,
NORTHERN CIRCLE,
*6th September* 1915.

A. W. LUSHINGTON,
*Conservator of Forests,*
*Northern Circle.*

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### MADRAS PRESIDENCY,

CENTRAL CIRCLE, 1914–1915.


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# FOREST ADMINISTRATION REPORT OF THE CENTRAL CIRCLE

FOR THE

FOREST YEAR ENDING 30TH JUNE 1915.

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## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in Area.

*Reserved Forests.*—The total area decreased from 5,788 to 5,770 square miles. One hundred and sixty-one acres were added by transfer from reserved lands and there was a reduction of 11,780 acres by disafforestation and by correct computation of area.

*Reserved lands.*—Two hundred acres consisting of enclosures and extensions to existing reserves were newly constituted reserved lands. One hundred and sixty-one acres were transferred to reserved forests. The area at the close of the year was 73 square miles of which 63 square miles constitute the leased forest in *Bellary*.

### 2. Forest Settlement.

2. The reservation of the enclosure to the Neraniki reserve in *Bellary* though notified in 1913–14 took effect only from 1st July 1914. One block in *East Cuddapah*, one in *Chinglput*, and three blocks in *Chittoor* aggregating less than one square mile were finally settled during the year. One block in *Anantapur* nearly 10 square miles in extent was finally notified although reservation took effect after the close of the year. Two blocks are pending final disposal by the Forest-Settlement officers and seven blocks have been notified under section 4 and are undergoing settlement.

### 3. Demarcation.

3. Sixteen miles of boundaries were newly demarcated at a cost of Rs. 830, and 3,739 miles of boundaries already demarcated were kept under repair or rectified at a cost of Rs. 12,373. Two hundred and sixty-seven miles of permanent demarcation with solid stone pillars surrounded by well-packed cairns of stones, and with a lock-spit or a two-feet wide stone alignment between the cairns, were completed.

### 4. Forest Surveys.

#### (*a*) *By Survey of India.*

4. The Survey of India did no work in the circle. The index map of the Madras Presidency was published during the year.

#### (*b*) *By Departmental Surveys.*

5. Alignment of roads, surveying disputed localities and coupes, verification or rectification of boundaries, and the preparation of coupe, working plan and fire maps were carried out by the departmental staff.

#### (*c*) *Maps.*

6. The reference maps referred to in section 80 of the Forest Code were maintained and posted in all the districts.

## CHAPTER II.—MANAGEMENT OF STATE FORESTS.

### 1. Regulation of Management.

#### (*a*) *Preparation and Control of Working Plans.*

7. *Preparation.*—In *East Cuddapah*, the Seshachellam timber working plan of the Kodur and Rajampet ranges and the Thunukonda fuel working plan of the Kodur Range were sanctioned. In *Nellore*, tentative plans for the forests in the Kavali

and Nellore Ranges were sanctioned; a tentative scheme for the *Anogeissus latifolia* area in the Marlapoody reserve received the approval of the Conservator; and a scheme for the management of the Ayyavaripalle reserve was under preparation. For the Atmakur working circle a working scheme was prepared; but no final orders were passed pending the Conservator's inspection. In *Chittoor*, the Tirupati Range working plan, so far as it affects the Mamandur forests, was revised and the revision was sanctioned by the Board.

8. *Control.*—In *West Cuddapah*, the working plans for the Lankamalais were cancelled as it was impossible to carry them out. Generally speaking in all districts in which there are working plans deviations therefrom occur on account of want of funds or of establishment to carry out the full programme of roads and buildings; from failure to sell coupes owing to want of demand; from the necessity of opening closed areas on account of local scarcity; and from many other reasons too numerous to detail. There is work in the circle to give full employment to two or three working plan sections for many years in recasting existing plans and in preparing new ones. Major charges like *Bellary* and *Guntūr* have no working plans in actual operation and in other districts most of the existing plans are sketchy and out of date.

(*b*) *Annual Plans of Operations.*

9. The sanctioned plans of operations in several districts were upset by uncertainty of the future management of forests classed as IV and V. In *Bellary*, a number of works were not undertaken owing to restriction in the programme due to classification of forests, amalgamation of the Alur and Adoni Ranges, and the cancellation of working plans in four ranges. In *Chingleput*, there were a few deviations caused by the sale of arrear coupes. In *Chittoor*, the deviations were due to curtailment of expenditure on cultural operations, to postponement of final demarcation pending classification of forests, and to reconsideration of the scheme to build a range office and quarters at Tirupati. In *East Cuddapah*, the timber improvement fellings in the Lankamalais were not started owing to the probability of the market being glutted; certain communications not provided for in the plan of operations were carried out in order to give access to coupes under working or for other urgent reasons; and other works of the kind which had been provided for were postponed. Owing to shortage of money or to reconsideration of the project some building works such as the rest-house at Tankudu; forest lines at Tankudu, Pichureddibhavi, Joti and Yelkundi were not carried out and other smaller works such as the construction of forest lines at Rollabodu and of sheds at Bollapalli, Kodur and Upparapalli were substituted. In *West Cuddapah*, there were deviations from the plan of operations in the working of most of the timber and fuel working circles for the reasons already given. Owing partly to want of funds, partly to the arrears of work from the previous year, and partly to reconsideration of the works themselves the following works were not carried out:—the conversion and extension of the Faridpenta bridle-path, construction of inspection shed at Nadimpalli, construction of a rest-house, range office and quarters at Sanipaya and of a tannah shed and forest lines at Rayachoti and Mudampad. In *Anantapur and Guntūr*, the plan of operations was generally adhered to. In *Nellore*, the scheme of experimental fellings in the Veligondas was abandoned, and the construction of certain buildings, viz., an inspection bungalow at Beripet, and forest lines at Udayagiri, Kanigiri, Amancherla and Sydapuram was postponed or cancelled.

2. COMMUNICATIONS AND BUILDINGS.

10. The following figures compare the outlay on communications and buildings:—

| | 1913-14. | 1914-15. |
|---|---|---|
| | RS. | RS. |
| Roads and bridges ... ... ... ... ... | 11,764 | 15,670 |
| Buildings ... ... ... ... ... | 37,122 | 33,510 |
| Other works ... ... ... ... ... ... | 3,947 | 2,675 |

The increase in expenditure on roads occurred chiefly in *East Cuddapah*, *Nellore* and *Chingleput*. There was a decrease in expenditure on buildings in *Bellary* and *Chittoor* owing to restriction of programme.

*(a) Roads and Bridges.*

11. In *East Cuddapah*, the construction of a road from Erraneetibandalu to Papanasam, of bridle-paths from Mogilipenta to Papanasam and Gadithalapenta to Umithala and of a cart-track from Sathyalathippa to Chelamabhavi were completed; while the construction of bridle-paths from Thummalabylu to Kodur, from Kondur to Harlabailu and from Rollabodu to Joti; the conversion of Vathalur-Thummalabylu cart-track into a road, and the conversion of the Kanamalopalli-Turkepalle and Kangamadugu-Pullagurapenta bridle-paths into cart-tracks and the construction of a road from Kodivengammabhavi to Kodur were in progress. In *Anantapur*, the Bukkapatnam-Siddarampuram and Bukkapatnam-Amagondapalayam roads were partly constructed. In *Nellore*, progress was made in constructing a bridle-path along the foot of the Veligondas, and from Udayagiri to Bandaganipalli, and in the Boggutla Valley. In *Chittoor*, the Mamandur chatram and Nellipatla-Rangampat roads were partly constructed.

*Tramways.*—In the Sriharikota Range of the *Nellore* district only 609 tons of fuel were carried by tramway compared with 7,602 tons in the previous year owing to the failure of the felling contractor to carry out his agreement. In the Coast Range 6,308 tons of fuel were carried. The tram-lines and trucks remain the property of Government but are no longer used for departmental operations. The use of them is given to the fuel contractors on terms provided in the felling contracts.

*(b) Buildings.*

12. In *Bellary*, the subordinates' quarters at Fort-wall and the inspection bungalow at Gudekota were completed during the year. In *Anantapur*, combined range office and quarters at Madakasira and an inspection bungalow at Kalasamudram were constructed. In *Guntūr*, the Venkatayapalem bungalow was condemned before the work was completed owing to the bad choice of site. It will be dismantled and the material used for reconstruction in a better situation. In *West Cuddapah*, the Veeraballe rest-house and subordinates' quarters at High school were completed. In *East Cuddapah*, the construction of range office at Rajampet, of subordinates' quarters at Gollupalle, Umethala and Mogilipenta and of rest-houses at Aremanipenta and Kondur was completed during the year. In *Nellore*, the range office at Dachur was built. In *Chingleput*, the rest-house at Allikuli was partly built.

*(c) Miscellaneous.*

13. A number of petty works were carried out in the circle of which the most important were the digging of wells and the improvement of water sources in the grazing blocks, on which Rs. 2,400 were spent. Various other works are mentioned in detail under head 4 (*c*).

## 3. Protection of forests.

*(a) General Protection.*

14. The following statement gives the number and classification of forest offences compared with the previous year :—

| Class. | Injury to forests by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in tracts in which grazing is prohibited. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1913-14 | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| 1. Cases taken into Court. | 10 | 2 | 1,228 | 1,251 | 867 | 897 | 111 | 121 | 2,216 | 2,271 |
| 2. Cases compounded. | 4 | 3 | 4,313 | 4,440 | 2,993 | 3,335 | 353 | 209 | 7,663 | 7,987 |
| 3. Cases undetected. | 197 | 123 | 188 | 266 | 247 | 297 | 1 | 2 | 633 | 688 |
| Total .. | 211 | 128 | 5,729 | 5,957 | 4,107 | 4,529 | 465 | 332 | 10,512 | 10,946 |

The increase in the total number of forest offences dealt with during the year is almost entirely due to illicit grazing of which more cases were reported in all districts except *Bellary* and *Nellore*. The figures in the above statement do not however accurately represent the facts, especially with regard to undetected cases. Thousands of offences the perpetrators of which were not detected are not reported at all, and in respect of injury to forests by fire the 123 undetected cases given in the above statement chiefly relate to the *Anantapur* and *Chittoor* districts which alone report 112. In other districts the administration reports have no reference to undetected cases unless the fire has been the subject of special investigation, which is often not the case.

The percentage of acquittal of forest cases taken to court was 9·66 compared to 8·98 in the previous year.

Seven thousand two hundred and eight cases were compounded for Rs. 76,379 compared to 6,876 cases compounded for Rs. 67,758 in 1913-14.

The punishments awarded by Magistrates are said to have been generally adequate.

Rewards were given sparingly in most districts for the successful detection of forest offences and amounted to Rs. 1,685.

15. *The Rules for the Guidance of Forest Officers in compounding Forest Offences* were observed throughout the circle.

(*b*) *Protection from fire.*

16. The area under fire protection during the year was 1,835 square miles compared to 2,091 square miles in the previous year, and the area reported to be burnt was 121 square miles compared to 150 square miles in 1913-14. A considerable portion of this area is however nearly immune to fire and the protection afforded is little more than the clearance of boundary lines and the attention given by the ordinary staff.

In the *Bellary* district the Sandur forests and some reserves adjoining them, some sandal and palmyra topes and the fuel coupes after felling were systematically fire-protected. These areas were protected with success. Elsewhere there were extensive fires especially in the partially protected Harpanahalli forests and in Adoni Range while in the unprotected forests about 18,000 acres were burnt. The cost of fire protection in the Sandur leased forests continues to be high; means of reducing it without loss of efficiency are under consideration. In *Anantapur*, 420,314 acres are reported to be under protection but in by far the greater portion of this area there is no more protection than is given by the presence of a small protective staff. The District Administration Report gives very little information on the subject and although the number of fires reported is the largest in the circle the percentage of successful protection is given as 97·62 per cent. In *Guntūr*, there were as usual practically no fires owing to the absence of grass in the dry over-grazed forests of this district. During the current year the employment of the special fire protection establishment has been stopped. In *West Cuddapah*, the experiment was tried of abandoning some of the inter-divisional and external fire lines in place of greater activity by patrolling parties. Whether owing to this departure or to other causes the results of the year's work were unsatisfactory and the proportion of failure rose from 6 to 17 per cent. and was probably higher if the burnt area could have been correctly measured. In *East Cuddapah*, the same experiment was conducted with the same results, the burnt area being 119 square miles compared to 43 square miles in the previous year, although as in *Cuddapah West* division the staff worked very hard to control the fires. The whole question of fire protection is now under consideration by the Board. In the *Cuddapah* district fire protection is an extremely difficult matter. The heat in April and May is almost unbearable, there is little water and less shade in the hill forests, the main hill blocks are very difficult of access and there are few interior communications by which the scene of a fire can be reached before the fire has got beyond control. Fires are chiefly caused by incendiarism for the benefit of the early grass and one of the most urgent reforms is the closure of the valuable red-sanders forests in the Cuddapah hills to any form of grazing. In the *Nellore* district, the only forests which suffer severely from fire are those of the

Veligonda Hills. During the year under report the systematic fire protection introduced by the District Forest Officer was generally successful and the fires which occurred were due to burning material being borne by the wind across the zamindari and Government fire-traced boundaries. In *Chingleput*, the only forests under systematic fire protection are those of Nagalapuram and Kambakkam, in the former of which 352 acres were burnt. The cost of protection of these two forests amounts to the high figure of Rs. 24 per square mile and the matter is under enquiry. In *Chittoor*, 212 square miles out of 214 square miles under special protection were free from fire. There were one or two cases of deliberate incendiarism and refusal by the villagers of assistance. They have been dealt with by closure of the burnt area to grazing.

The origin of fires is given in Appendix A.

*(c) Protection from cattle.*

17. The area closed and opened to grazing is given in statement No. 73. It will be noted that goats are being excluded from the forests of all districts in accordance with the arrangement which gave the goat-owners three years grace in which to reduce or dispose of their flocks. The total number of cattle grazed in the forests of the circle, amounted to 1,593,128; a small increase of 3,600 head over the number grazed in the previous year; but the revenue increased from Rs. 2,70,931 to Rs. 2,99,154 owing to the increased kancha rents in *Nellore* and to enhanced fees of goats throughout the circle. The general incidence of grazing still remains far too high to permit improvement of the forests in many parts of the circle. In *Guntūr* the present incidence is 1 cow unit per 1·80 acres throughout the forests of the district; and in *Chingleput* to 1 cow unit to 1·20 acres. The classification of forests having been completed grazing schemes for the various districts of the circle are now under consideration. That for *Guntūr* was submitted in March 1915 and was sanctioned by Government after the close of the year.

The nuisance of the semi-wild cattle on the Sriharikota island was mitigated by the capture of 179 animals.

An analysis of the cattle impounded during the year with the average of three years is given in Appendix B.

*(d) Protection against injuries from natural causes.*

18. *Lantana* was eradicated to a small extent at Ramandrug and at Horsleykonda and prickly-pear was removed from parts of some reserves in *Bellary*. In *West Cuddapah*, the *Pterocarpus santalinus*, *Anogeissus latifolia*, *Strychnos Nux-vomica and Eugenia Jambolana* were defoliated by some unidentified caterpillar pest.

4. SYLVICULTURE.

*(a) Natural Reproduction.*

19. There is little of interest in the circle to report. Seedling reproduction has three great enemies in drought, fire, and cattle and a strong flush of seedlings on the ground during the monsoon inspires no great hopes in the District Forest Officer except where the reserve happens to be under strict protection. The sandalwood has been long established in *Cuddapah*, *Chittoor* and *Bellary* and recently so in *Anantapur*. It is rapidly spreading in the last three districts as the trees mature and birds carry the seeds. Coppice reproduction in the felled coupes is reported to have been satisfactory in all districts except *Guntūr* where the difficulty of protecting the regrowth from cattle is particularly great, and where the crop is usually so poor that reliable contractors cannot be persuaded to undertake the work of felling.

*(b) Artificial Reproduction.*

20. *Regular plantations.*—Further planting has been abandoned throughout the circle and the casuarina plantations on the coast are being gradually sold. Some small expenditure was incurred in watering existing plantations in *Chingleput* and Rs. 4,188 were spent in *Nellore* for the same purpose.

*Cultural operations.*—In *Bellary*, departmental cultural operations were confined to an expenditure of Rs. 260 on mound sowing in some reserves of the Adōni range and to the sowing of sandal in the Kotekal reserve. Afforestation by the lease of

land to ryots for cultivation combined with sowing of the seed of forest trees was carried out in Halaharivi and Badanahal reserves with moderate success. In *Anantapur*, cultural operations for the spread of sandal were carried out in Amagondapalayam, Kadiri and Penukonda reserves at a cost of Rs. 271 ; the results in two out of the three operations were satisfactory. In *Chittoor*, the seed of *Red Sanders* was dibbled on mounds in the Chittoor reserve, but the result was a failure. The dibbling of sandal seed in the reserves of the Palmaner range continued to give fair results.

*(c) Operations for the improvement of the growing stock.*

21. *Timber improvement fellings.*—In *Cuddapah East*, 800 acres of forest were felled over. *Coppice felling* continued to be carried out in all districts of the circle for the supply of firewood. Provided the coupes can be subsequently protected from cattle there is no better preliminary method of restoration than that of cutting back the degraded scrub jungle which forms so large a proportion of the forest area in the central circle. *Fencing* of felled coupes was carried out in all districts by dead thorn hedges, by aloe hedges planted on mounds, or by prickly-pear. The first of these methods is by far the cheapest and easiest ; but the fences only last for a short time and are often impossible to maintain for want of material. The question of protection of coupes in a forest which is open to grazing is one of the most difficult with which the department has to deal in this circle. *Stone-walling* which is by far the most effective method of protection from trespass was carried out in *Bellary*, *Anantapur* and in *Cuddapah* at a cost of Rs. 8,500. The cost is however often prohibitive and it is not a method which can be widely used. It had to be stopped in the first two of the above districts owing to the increasing cost. *Bunding of streams* was carried out on a small scale in *Chittoor*, *Cuddapah* and *Bellary*. Experience in *Cuddapah* shows that there is no use in throwing bunds across streams on the steeper hill slopes. The water percolates through the rocky bed and no deposit is formed.

*(d) Experiments on species.*

22. There is little of interest to report. The *Mahogany* in the *Cuddapah* district continues to do fairly well and *Eucalyptus globulus* in the Palmaner range of *Chittoor* district is thriving while it is dying out in *Cuddapah*. *Dalbergia sissoo* cuttings in the Moka plantation of *Bellary* established themselves successfully. Ten plants of *Acacia auriculiformis* still survive in *West Cuddapah*.

## 5. Exploitation.

*(a) System of management.*

*(i)* Major Forest Produce.

23. The total area under working plans was 1,820 square miles and the areas treated under different sylvicultural systems are shown below :—

| | Square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| 1. Method of clear felling by compartment ... ... | 7 | ·39 |
| 2. Simple coppice ... ... ... ... ... ... | 8 | ·44 |
| 3. Coppice with standards ... ... ... ... | 743 | 40·82 |
| 4. Method of improvement fellings ... ... ... | 217 | 11·92 |
| 5. Area closed to felling or worked under no definite sylvicultural system ... ... ... ... ... | 845 | 46·43 |
| Total ... | 1,820 | 100·00 |

*(ii)* Minor Forest Produce.

(1) *Miscellaneous Produce.*

24. The right to collect minor produce was leased out to contractors as usual in all the districts, except in the Sriharikota Range of *Nellore* district where for special reasons the produce was collected and sold departmentally. The increase in price of leaf-manure to Rs. 2 per cart load in *West Cuddapah* and *Nellore* had a deterrent effect on the demand.

Permits continued to be issued for stone, earth and road materials.

(2) *Extraction of fodder.*

25. The Military Grass Farm Department held leases of areas in *Bellary*, *Anantapur* and *East Cuddapah* and removed hay at Rs. 2 per ton. Mr. Howes, an independent contractor who took on lease the closed compartments of the Bellary Range and certain compartments of the Donimala block, removed 240 tons of hay.

(3) *Free Removal of Grass.*

26. Free removal of grass was allowed in all the districts except *Guntūr* and *Chingleput* where there was either no grass to remove or little demand for the concession. The concession of free grass removal, which, under reasonable precautions, does more good than harm to the forests, was freely taken advantage of in the other districts. The concession was temporarily withdrawn in certain cases in the *Anantapur* district as the villagers adjoining the forests had failed to help in putting out fires.

(4) *Hay-making.*

27. The departmental manufacture of hay was abandoned. $15\frac{7}{8}$ tons of the previous year's stock in *Guntūr* was sold for Rs. 156.

(5) *Grazing.*

28. The revenue realized during the year was Rs. 2,99,154 against Rs. 2,70,931 in the previous year. There was an increase in all the districts except *East Cuddapah* and *Chingleput* and the reasons thereof have been given in Chapter III. The decrease in revenue in the *Chingleput* district is due to the handing over of 5 reserves to Panchayat management, to disafforestation of two reserves, and to the closure of certain other reserves. The decrease in revenue in *East Cuddapah* is small and calls for no remarks.

(*b*) *Agency of Exploitation.*

29. Departmental exploitation of forests has almost ceased; but small quantities of timber and fuel, obtained in clearing kancha, coupe and boundary lines, and in opening out roads, were disposed of departmentally. Small quantities of timber were also extracted for departmental buildings.

(*c*) *Outturn and Sources of Forest Produce.*

30. The following statement gives the total outturn compared with the previous year :—

| Agency of exploitation. | Timber in cubic feet including sandal-wood. | | Fuel in cubic feet. | | Bamboos in number. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| By Government agency .. | 20,567 | 11,071 | 100,896 | 36,063 | 9,120 | 12,200 | 18,941 | 14,701 |
| By purchasers (including confiscation) | 1,585,581 | 1,065,163 | 5,688,506 | 6,584,517 | 1,766,649 | 1,833,386 | 6,92,586 | 6,31,218 |
| By right-holders .. .. | .. | .. | .. | .. | .. | .. | 150 | 151 |
| By free grantees .. .. | 84,180 | 38,543 | .. | .. | 14,775 | 17,127 | 2,457 | 1,320 |
| Total .. | 1,690,128 | 1,114,777 | 5,789,402 | 6,620,580 | 1,790,544 | 1,862,713 | 7,14,134 | 6,47,390 |

(i) Departmental Agency.

31. Compared with the previous year the outturn by departmental agency under *timber* and *fuel* decreased owing to stoppage of departmental operations and that under *bamboos* showed an increase as a greater number were exploited for departmental purposes in *Bellary* and *East Cuddapah*. There was a fall under *Minor Produce* owing to the failure to sell the Nux-vomica crop in *Nellore*.

(ii) By Purchasers.

32. (*a*) *Timber.*—The decrease is due to fewer applications for forest land on darkhast.

(*b*) *Fuel* and (*c*) *Bamboos.*—The increase is due to the further extension of the contract system.

*Minor produce.*—The decrease is due to a smaller collection of Tangedu bark in *Bellary* and to the very marked fall in the demand for mica in *Nellore*, owing to the war.

(iii) Rights and Privileges.

33. Details of the concession of free removal of grass, have been given in paragraph 26 *supra*. In *East Cuddapah*, 807 cattle of the villages of Settigunta and its hamlets were allowed to graze without fee according to the terms of forest settlement. In *Nellore*, the Madigas and Muthrachās on the Udayagiri-Durgam hills were evicted from the top of the hill for abuse of their privileges; but on their representation to Government they were allowed in consideration of their long residence in the locality, to resettle at the foot of the Durgam. The assistance that they need to establish themselves in the new settlement is being given them by the Collector.

(iv) Free grants.

34. The statement below shows the details of free grants made during the year. They were made chiefly for rebuilding houses destroyed by fire. In *Nellore*, palmyra trees and leaves were granted for the construction of huts for the Kavali Erukala settlement, and free grazing was allowed in the tope reserves for 4,489 cow units. In *Chingleput*, the removal of vellal grass was permitted free of cost in certain cases and the free grazing of 81 cows and bullocks was allowed in Guindy Park.

| — | Timber. | | Fuel. | | Bamboos. | | Grass and grazing | Other minor produce. | Total. value. |
|---|---|---|---|---|---|---|---|---|---|
| | C ft. | Value. | C. ft. | Value. | Number. | Value. | Value. | Value. | |
| | | Rs. | | | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | .. | .. | .. | .. | .. | .. | 151 | .. | 151 |
| Free grantees .. .. | 38,543 | 3,509 | .. | .. | 17,127 | 246 | 1,122 | 198 | 5,075 |
| Total . | 38,543 | 3,509 | .. | .. | 17,127 | 246 | 1,273 | 198 | 5,226 |

## CHAPTER III.—FINANCIAL RESULTS.

35. The financial position of the year is compared with that of the previous year and the average of the preceding five years in the following abstract :—

| — | 1914-15. | 1913-14. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. | 10,90,120 | 11,26,791 | 11,51,062 |
| *Expenditure.* | | | |
| A.—Conservancy and works including refunds. | 2,51,895 | 2,79,854 | 4,46,585 |
| B.—Establishments .. .. .. .. | 3,99,058 | 3,73,845 | 3,47,133 |
| Total of A and B .. | 6,50,953 | 6,53,699 | 7,93,718 |
| Net results .. | + 4,39,167 | + 4,73,092 | + 3,57,344 |

The net results show a surplus of Rs. 4,39,167 against one of Rs. 4,73,092 in the previous year and of Rs. 3,57,344, the quinquennial average. Of the receipts 30 per cent. were realised from major produce, 28 per cent. from grass and grazing,

31 per cent. from minor produce, and the balance 11 per cent. from miscellaneous items. The total expenditure of the year was divided among heads A, B and C of section 215 of the Forest Code in the following proportion: —A 1 per cent., B 59 per cent. and C 40 per cent. The estimated value of produce at sale depots at the end of the year was Rs. 720 against Rs. 3,044 at its commencement. The revenue outstanding was Rs. 2,67,517-3-6 of which Rs. 12,080-15-5 fell due within the year.

The important variations between the actuals of the year and those of the previous year are explained below :—

RECEIPTS.

(i) *By Departmental Agency.*

| | Rs. | |
|---|---|---|
| *Timber* ... ... ... ... | — 4,145 | Due to the stoppage of departmental exploitation of *timber*, *fuel* and *hay*. |
| *Fuel* ... ... ... ... | — 6,068 | |
| *Bamboos* ... .. ... ... | — 187 | |
| *Sandalwood* ... ... ... | — 732 | |
| *Minor forest produce* ... ... | — 4,080 | |

(ii) *By purchasers.*

| | Rs. | |
|---|---|---|
| *Timber* ... ... .. ... | — 10,632 | The decrease under *timber* is due to a falling off in the sale of trees on darkhast lands in *Guntūr* and *Bellary*. The very large decrease in the revenue from sale of *minor produce* is due to the suspension or part collection of the Tangedu bark lease amounts in *Bellary* and *Anantapur*, and to the general fall in revenue from mica leases in *Nellore*; the war being the direct cause in both cases. On the other hand there was a rise in the revenue under *fuel* due to an increased number of coupes sold under the contract system; and a rise in the *grazing* revenue due to the enhanced fees for goat browsing in *Bellary*, to the extension of the Kancha system in *Nellore*, and to the increased number of licenses issued for grazing in the upland taluks in Guntūr. |
| *Fuel* ... ... ... ... | + 31,035 | |
| *Bamboos* ... ... ... ... | — 872 | |
| *Grazing* ... .. ... ... | + 28,223 | |
| *Minor forest produce* ... ... | — 96,967 | |

(iii) *Miscellaneous (including confiscated drift and waif-wood).*

+ Rs. 27,754—the sale of forest land in *Nellore* chiefly contributed to the increase.

EXPENDITURE.

*A.—Conservancy and Works.*

— Rs. 27,734. The main reasons for the decrease were :—

Stoppage of departmental fuel operations, the discontinuance of hay-making, the short programme of construction of buildings in *Bellary* and *Chittoor* and the curtailment of cultural operations in *Bellary*, *Guntūr* and *Nellore*.

The decrease was partly counterbalanced by the payment of Rs. 6,220 under orders of Government as supplemental compensation to the owners of the Guntūr fuel depot site.

*B.—Establishment.*

+ Rs. 25,213. The payment of leave allowance to a Conservator, to a Deputy Conservator and to an Extra Deputy Conservator; the posting of a senior Deputy Conservator to *Bellary*; the appointment of an Assistant Conservator, an Extra Assistant Conservator and several additional temporary foresters and guards to districts in the circle, the re-organization of the mica establishment in *Nellore*; the increased touring of officers, and the increased cost of uniforms, all contributed to the increased expenditure under *B.—Establishment.*

## CHAPTER IV.—ADMINISTRATION.

36. The charge of the circle was held by Mr. H. B. Bryant until 25th January 1915 and by Mr. S. Cox for the rest of the year.

37. *District and Range charges.*—Proposals for the trifurcation of the *Cuddapah* district were submitted to the Board at the end of the year. There was an addition to the number of ranges in *East Cuddapah* and two of the existing ranges in *Guntūr* and in *Chittoor* were amalgamated. Proposals to transfer to *Anantapur* the small portion of Iswaramala reserve which lies in the *Chittoor* district were pending with the Board.

38. *Work of superior officers—Extracts of Collectors' remarks:—Cuddapah (By Mr. A. R. Bānerji). West.*—"Mr. T. A. Whitehead was in charge of both divisions of the district until 17th July 1914 when he was relieved of the West division by Mr. A. Raju Nayakar whose work has been characterised by zeal. I find he is a keen forest officer and full of energy. The supervision exercised by him over his subordinates and his inspections have been on the whole thorough and efficient." *East.*—"Mr. Whitehead's work has been characterised by keenness and insight and he has been ably assisted by Mr. Abdul Qadir." *Nellore (By Mr. R. Ramachandra Rao).*—"Mr. Arbuthnot was District Forest Officer throughout the year. He is very sympathetic in his attitude towards the public and apprehending rightly that their co-operation is essential for efficiency of forest administration, has frequently forestalled me in meeting the requirements of the people. He does not spare himself in the discharge of work. But expecting the same of his subordinates he is apt to drive his subordinates too much and expect more of them than is possible. If he remains in the district a few years, I am sure, the grazing policy of the district will become practically fixed in a manner satisfactory both to the State and to the people. Mr. S. V. Devadasan, Extra Assistant Conservator, has been busy touring the district and studying its peculiarities under Mr. Arbuthnot's directions. He is a capable and intelligent officer." *Chittoor (By Mr. H. L. Braidwood).*—"Mr. Jackson's work as District Forest Officer was in every respect satisfactory. Mr. D. L. Sathe, Assistant Conservator, is getting a good grasp of forest work and should turn out an efficient Forest Officer."

The Collectors of *Bellary* and *Guntūr* offer no remarks and those of *Anantapur* and *Chingleput* state that as they arrived late in the district they are unable to report on the work of their District Forest Officers.

*Conservator's remarks.*—I endorse the remarks of the Collectors given above. Mr. Panchapakesa Ayyar in *Guntūr* and Mr. Thornton in *Bellary* have worked hard to bring their divisions into better order and Mr. Gajaraja Mudaliyar in charge of *Chingleput* is a keen and active officer.

39. *Executive establishment.*—The work of rangers is reported to have been satisfactory in one district, moderate in three districts and unsatisfactory in the rest. One Ranger was dismissed but reinstated to a lower grade on appeal to the Board of Revenue after the close of the year. Another dismissed Ranger reinstated on appeal remained on duty for only six months after his return when he was again suspended and charged with criminal breach of trust. He has since been sentenced to six months' rigorous imprisonment and Rs. 200 fine. There were also cases of temporary reduction in grade and suspension pending investigation of charges. In the higher grades of Rangers there are a number of excellent hard working officers of good character; but the lower grades are unfortunately too full of officers with no interest in their profession and with no intention of doing more work than serves to keep them in the service.

The Deputy Ranger grades are largely filled by men under probation and there have been a good many removals of men who have proved unfit for a forest life.

40. *Protective establishment.*—The conduct of the staff continued to be unsatisfactory. One Forester resigned his appointment, five were reverted to Forest Guards or removed from service, five were suspended and four were reduced. Among the guards there were seven resignations, 38 suspensions, six reductions, 58 removals from service, 15 dismissals and three convictions. The present unsatisfactory state

of the protective establishment is partly due to the inferiority of many of the rangers under whom the staff has to work. Under good rangers the protective staff usually does good work.

41. *Ministerial establishment.*—The work is reported to be generally satisfactory. Mr. Gundu Rao, the efficient Manager of the Circle office, was promoted to be Forest Assistant to the Board of Revenue.

42. *Health of establishment and casualties.*—The health of establishment is reported to have been rather better than usual; but there is always a great deal of fever among the staff in certain parts of the circle. One Forester and two Forest Guards died of malarial fever, two Forest Guards died of cholera and one Forest Guard and one watcher were murdered by a gang of sandalwood thieves in the Badvel taluk of *Cuddapah.*

43. *Relations between Revenue and Forest Officers*—continued as usual to be very cordial.

44. *Service books*—maintained and verified in all the districts.

45. *Tours of the Forest Member.*—The Hon'ble Mr. H. F. W. Gillman, I.C.S., inspected the red-sanders forests of Rajampet and Kodur ranges in *East Cuddapah* and the Mamandur and Horsleykonda forests in *Chittoor.*

46. *Conservator's inspection.*—All the District Forest offices in the circle were inspected during the year and found to be in good order. The Conservator inspected some of the forests in *Bellary*, *Guntūr*, *East Cuddapah*, *Chingleput* and *Chittoor.* The total number of days spent in camp was 160.

47. *Touring of District Forest Officers.*—More than the prescribed minimum of touring was done by all District Forest Officers.

48. *Inspection of Range offices.*—All the Range offices were inspected by the District Forest Officers or their Assistants except one in each of the *West Cuddapah*, *East Cuddapah* and *Nellore* divisions. The omission in the second was due to the range having been formed only in November 1914 and in the other two instances they were inspected immediately after the close of the year.

49. *Audit of accounts of District Forest offices.*—The special staff of the Accountant-General's office audited the accounts of all the District Forest offices except those of *Guntūr* and *Chingleput* and the results were as usual satisfactory.

50. *Imperial Forest College, Dehra Dun.*—One Provincial Service probationer, posted for preliminary training to this circle, was deputed to the College and is undergoing training.

51. *The Madras Forest College, Coimbatore.*—One Ranger and four Deputy Rangers were deputed for training during the year. Three Deputy Rangers returned with Higher Standard certificates.

52. *Vernacular Training School.*—The year's session was held in *West Cuddapah.* Twenty-four Guards and three Foresters underwent training and the course had not closed at the end of the year. The school is reported to have done good work under the management of the instructor M.R.Ry. V. N. Seshagiri Rao and his assistant Mr. T. T. Ansep.

## CHAPTER V.—GENERAL.

53. *Realizations of revenue from the usufruct of toddy-yielding trees on Government wastes and poramboke lands.*—Rupees 51,407 were realised against Rs. 54,624 in the previous year.

54. *Measures adopted to encourage the growth of manure leaf-yielding plants.*—No measures were adopted.

### RULES UNDER THE FOREST ACT.

55. *Timber Transit Rules.*—The existing rules are stated to have worked satisfactorily in *Guntūr* and *Chittoor.* The revised rules for *West* and *East Cuddapah* are reported to work effectively; many illicit removals were brought to light and smuggling was reduced.

56. *Rules under section* 26 *of the Forest Act.*—The privileges allowed under these rules were generally taken advantage of and no complaints nor abuses were brought to light.

57. *Inventory of valuable stock.*—The stock registers are reported to have been maintained and verified in all the districts.

58. *Rain gauges*—were maintained in all the districts except *Chingleput.*

59. *Cultivation in reserved forests with a view to afforestation.*—No new reserves were leased out in *Bellary.* The plants of 1908 in Banavasi reserve have established themselves and are 8 to 16 feet in height and the girth of the margosa saplings is 16 inches. The plants of 1912–13 in Budanahal reserve have also established themselves and are 10 to 12 feet in height. An extent of 300 acres in Halaharivi reserve was sown with margosa and babul in 1913–14 and a fair crop has established itself on the whole area. The sowing was a failure over an area of 60 acres which has however been resown in 1915–16. In *Anantapur*, the cultivation under certain restrictions of a few acres of land by ghat-talayaries continued. *In Nellore*, *West Cuddapah* and *Chittoor* certain plots were assigned to the police ghat-talayaries for the same purpose.

60. *Suits.*—The Moka land suit which was pending at the close of the previous year was disposed of in favour of Government. The appeal preferred by the shrotriemdar of Putlampalli in *West Cuddapah* in 1912–13 was decided in favour of the shrotriemdar during the year under report.

61. *Live-stock.*—Four buffaloes were maintained in *Chittoor* district of which two are reported to be very old and past work.

62. *Mining.*—In *Bellary*, the mining lease for 30 years over 1,609 acres in Harpanahalli taluk granted to Mr. A. Ghouse of Dhone in the previous year, continued to be in force. The application of Mr. A. Ghouse for a lease in the Copper mountains of Bellary Range and that of Mr. A. D. Sanders of Ramandrug General Sandur Mining Company for prospecting manganese ore in Tonasigeri reserve were pending disposal. The prospecting license granted to Messrs. A. M. Jeevanjee & Co., Bombay, for red oxide in Joga and Hospet reserves, was cancelled as they failed to commence operations. The other applications referred to in the previous year's report were either withdrawn, refused or lodged. No fresh licenses were granted. In *Anantapur*, no new licenses for prospecting gold were given and in *Guntūr* the diamond mining operations were in suspension.

## Nellore Mica and Mica Mines.

*Applications.*—Fifty-one applications were received during the year and these added to the 58 pending from previous year raised the total number to 109. Of these 76 were disposed of during the year leaving a balance of 33 at its close.

*Mines in Government lands (State mines).*—There were 53 mining leases in force at the beginning of the year of which four were relinquished and five cancelled during the year. Nine new leases were sanctioned and two time-expired leases were renewed; thus leaving 53 pending at the close of the year, including the nine cancelled mines of M.R.Ry. A. Subba Nayudu, referred to in the previous year's report.

*Prospecting licenses.*—Twenty-seven licenses were in force during the year for varying periods.

*Patta land mines (shared mines).*—The year opened with 28 agreements in force of which three were relinquished or cancelled during the year. To these two licenses granted during the year were added thus making the number of agreements in force at the close of the year 27. Of these, the Shah and Pallimitta mines of Messrs. Badsha Sahib & Co., the Lakshminarayana of Mr. Lakshminarasa Reddi, the Pattabhirama mines of Y. Audemmah, the Bhuputri mine of Mr. G. Subrahmanyam and the Kubera patta land mine of Chennur gave a steady outturn. The "E and F mine" of Talupur and Palamani mine at Chaganam under the management of the Official Receiver are also reported to have been effectively worked during the year.

*Mines in permanently-settled estates (private mines).*—There were 21 mines in the zamindari and shrotriem lands yielding 61,348 lbs. of mica valued at Rs. 25,911. The mines of Kalichedu, in the hands of an Austrian firm, stopped work after war was declared. The mine at Oorupalli and the Chukka mine at Jogipalli shrotriem produced the best results.

*Illicit mining.*—There were no cases of illicit mining during the year.

*Outturn and royalty.*—The marginally given figures show the rapid fall in yield of mica during the year, a result due to the general trade depression caused by the war and to the fact that many of the mines were in the hands of enemy aliens. Besides mica, 4,833 lbs. of Samarskite was obtained which realised Rs. 45 in royalty fees. The China Clay and Garnet mines were abandoned.

| Years. | LB. | OZ. | RS. |
|---|---|---|---|
| 1913–14 ... | 826,512 | 2 | 27,637 |
| 1914–15 ... | 331,568 | 3 | 14,847 |

*Financial results.*—The revenue realized was Rs. 19,122 against Rs. 32,940 in the previous year and the expenditure Rs. 6,617 against Rs. 4,953. The increased expenditure is due to the revision of mica establishment.

*Labour.*—1,488 persons were employed in mining compared to 2,974 in the previous year. Wages were the same as in the previous year. Children were not allowed to work below ground but were employed in dressing mica. The electric installation at Kalichedu and Sankara mines had not started work yet.

*Accidents.*—None.

*Ventilation and lighting in tunnels.*—No change.

*Inspection by superior officers.*—The Inspector of Mines visited 43, Collector 3, the District Forest officer 1, the Revenue Divisional officers 5 and the District Medical and Sanitary Officer 4 mines. As a result of the latter's inspections steps were taken for the improvement of sanitation and supply of drinking water.

*Prospects of industry.*—As in the previous year only three of the nine cancelled mines belonging to A. Subba Nayudu were worked during the year. Of late some new applications for mining leases have been received and there is some hope of a revival of the industry.

## Recommendations of the Forest Committee.

### (*a*) *Classification of forests.*

63. The classification of the forests in *Guntūr*, *East Cuddapah*, *Nellore*, *Chingleput* and *Chittoor* was sanctioned during the year. Proposals for classification in *Bellary* and *Anantapur* were sanctioned after the close of the year, and those for *West Cuddapah* were submitted and are awaiting the orders of the Board.

### (*b*) *Constitution of forest panchayats.*

64. During the year seven panchayats in *Anantapur*, two in *Nellore*, eight in *Chingleput* and one in *West Cuddapah* were in charge of forests.

The Collectors' reports on the year's management show that in *Anantapur* the management was fairly good in three cases and bad in four. In *Chingleput* the management was fairly good in five cases, very bad in one case, and very good in two cases. The Collector reports that difficulty is experienced in extending the panchayat system owing to the unwillingness of the villagers to undertake the management on terms which provide for forest conservancy. In *Nellore* the management by the Kavali panchayat is reported to have been fairly satisfactory, and that by the Karedu villagers to be very satisfactory.

During the year arrangements were made to establish 21 panchayats in *Chittoor*, six in *West Cuddapah*, three in *Anantapur*, and two in *Chingleput*. The agreements only came into operation at the close of the year.

Mr. E. A. Davis, Personal Assistant to the Forest Commissioner, was on special duty in connection with panchayats during the latter part of the year and toured in *Cuddapah*, *Chittoor* and *Chingleput* districts of the circle.

*(c) Opening of fuel coupes for rural supply.*

65. Under the contract system coupes are being opened wherever there is a local demand sufficient to induce a contractor to undertake the felling. Every encouragement is given to contractors and the prices paid by them to the department are often little more than nominal. The result has been a wide extension of supply centres and the forest has benefitted by being cut back and properly coppiced.

*(d) The patrol system.*

66. This system cannot be widely introduced until the protective establishment is reorganized. In the meantime it is being experimented with on a small scale in several districts and experience is being gained. In *Cuddapah*, it is found that if patrols be substituted for the local and resident protective staff, the result is a failure. The patrols are only useful if they work in connection with a resident staff which can supply them with sufficient local information to act on. Otherwise the patrol's movements are too well observed for their inspection to be effective. In *Chittoor*, it was found that a patrol was only useful provided it was under the control of an active and intelligent Deputy Ranger, and at present it is not easy to provide such leaders.

*(e) Inducement to villagers to aid in forest conservancy.*

67. Nothing new of any practical importance has been done in the circle during the year. The whole matter has however been the subject of constant discussion and the results will appear when the district grazing schemes are formulated. In *Bellary* and *Nellore* certain reserves were closed to grazing in 1914–15 on account of wilful incendiarism; and in a few cases in *Bellary*, *Cuddapah* and *Chittoor* the grazing fees have been raised for 1915–16 or the burnt areas have been ordered to be closed to grazing for the same reason.

*(f) Improvement of water-supply and grazing facilities in Government grazing grounds (Board's Proceedings, Forest No. 125, dated 29th June 1914).*

68. In *Anantapur*, *East Cuddapah*, *Nellore* and *Chittoor*, the existing wells and ponds were repaired or deepened. A step-well was constructed in *Anantapur*. In *Guntūr* the graziers were allowed to repair the existing kuntas for the benefit of their cattle. The subject is not reported on in *West Cuddapah* and nothing was done in this direction in *Bellary* and *Chingleput*. More progress may be expected now that the reserves have been definitely classified.

*(g) Sale of plantations.*

69. The casuarina plantations on the coast are being gradually disposed of by sale. About 500 acres were sold during the year under report.

MADRAS
*16th September* 1915.

S. Cox,
*Ag. Conservator of Forests, Central Circle.*

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### MADRAS PRESIDENCY,

SOUTHERN CIRCLE, 1914–1915.


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# FOREST ADMINISTRATION REPORT OF THE SOUTHERN CIRCLE

FOR THE

FOREST YEAR ENDING 30TH JUNE 1915.

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## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### INTRODUCTORY.

The principal work of the year in this Circle was the classification of Reserves and the preparation of working plans for the important sandal areas.

### 1. ALTERATION IN AREA.

*Reserved forests.*—The chief feature of the year was the disafforestation of 1,046 acres (river-side plantations) in *North Vellore* and of 972 acres of casuarina plantations in *South Arcot*. The former are being reafforested. In *Madura* an area of 1,914 acres was deducted on account of the recomputation of areas of the reserves investigated by the Special Deputy Collector.

*Reserved lands.*—Ariyur Shola Block (1,159 acres) in *Trichinopoly* became reserved land.

The total area of the reserved forests and reserved lands as it stood at the close of the year was 4,426 square miles against 4,430 in the previous year. The transfer of control over the Cauvery and Coleroon padugais to the Public Works Department was ordered at the close of the year.

### 2. FOREST SETTLEMENT.

2. Settlement is virtually complete except in *North* and *South Salem* in which districts 64 square miles are still under settlement. In *South Salem* it is possible that there may be further additions.

The field work of the Hudaidurgam Block was completed and the whole settlement should be finished shortly.

The settlement of Aranha and Thirtagiri reserves is complete but the result of appeals is awaited. That of Jarugumalai has not yet been taken up.

### 3. DEMARCATION.

3. Final demarcation was carried out in *North Salem* and *Madura* over a length of 7 and 48 miles, respectively. Rectification of demarcation of reserve boundaries was carried out in *North Vellore*, *South Arcot*, *North Salem* and *Tinnevelly*. Demarcation in *North Salem* has been found to be very incorrect and a Ranger has since been posted on special duty to complete the checking of boundaries. In *South Salem* 239 miles were cleared and lockspitted at a cost of Rs. 989. A sum of Rs. 1,840 was spent on repairing previously existing boundaries. In the whole Circle, 189 miles of line were repaired and 7,189 miles were cleared and maintained. One hundred and eighty-nine miles remained to be demarcated at the close of the year of which 178 miles are in *Madura*. The Special Deputy Collector appointed to re-investigate the settlement of certain reserves on the Palni Hills completed his work on the 6th February 1915. He prepared revised notifications for Poombarai-Vilpatty Valley and Kudriyar reserves and verified the correctness of the existing notification in respect of Manjampatty reserve.

### 4. Forest Surveys.

*(a) By the Survey of India Party.*

4. During the year, five reserved forests (42,000 acres) in *South Vellore* were surveyed on the 2 inches = 1 mile scale by the Survey of India Party.

*(b) By Departmental Survey.*

5. All coupes were surveyed by the ordinary staff, except in *North Salem* where a surveyor was employed in Salem West Range, and in *Madura* where similar work was done by a supervisor.

A variety of survey work such as the determining of village boundaries in panchayat areas, verification of reserve boundaries and the surveying and aligning of roads and bridle-paths was done by departmental surveyors.

The Kodaikānal pine plantations were surveyed by two supervisors.

*(c) Maps.*

6. *Reference maps referred to in section 89 of the Forest Code.*—These are reported to have been maintained in all districts.

## CHAPTER II.—MANAGEMENT OF STATE FORESTS.

### 1. Regulation of Management.

*(a) Preparation and Control of Regular Working-plans.*

7. *Preparation.*—Considerable progress has been made with the preparation of working-plans during the year, but the classification of reserves, and developments which have taken place have necessitated the revision of many existing plans.

In the *South Salem Division* the Board has sanctioned the sandal working-plan of the Chitteris and this has been supplemented by a plan dealing with the extraction of bamboos, the regulation of grazing and concessions to the Malayalees. This plan was submitted for sanction after the close of the year. The total area covered by these two plans is 70 square miles.

In *South Vellore*, the Working-Plans Officer prepared an elaborate plan to cover the sandal working of the whole of the Javadies (176 square miles). This plan entailed the complete enumeration of all sandal trees in this valuable forest. It was sanctioned after the close of the forest year.

In *North Salem.*—The reconnaissance report for the sandal forest of the division has been approved and the detailed enumeration of the stock in Denkanikotta Range is well advanced. The revision of the Dharmapuri working-plan has also been taken up.

In *Madura.*—The reconnaissance report for the fuel areas of the district has been approved. The stock maps are approaching completion and complete details are nearly ready. This work is being done by the Special Working-Plans Officer.

A working-plan was prepared by the District Forest Officer for the Kodaikānal pine plantations but was not sanctioned.

In *Trichinopoly.*—The sandal areas of the Kollimalais and Pachamalais have been mapped and statistics are being collected.

The work still to be done in preparing and revising working-plans in this Circle is enormous and the Conservator's tours in *North* and *South Salem* and *South Vellore* have shown that very few of the working-plans which are in existence are suitable at the present time.

In *Tinnevelly.*—On the whole the old plans have worked well for a long series of years but here revision and extension of the areas dealt with is required.

8. *Control.*—Very little control has been kept over working-plans and the control registers are not well maintained

The following deviations are some of the more pronounced :—

*North Vellore.*—Out of 48 fuel coupes prescribed for exploitation during the year only 17 were leased out. Out of the 296 arrear coupes, only 15 were actually worked. This failure in working is said to be due to difficulty in transport and the inaccessibility of several coupes.

*South Vellore.*—Timber coupes were not worked on account of the unsuitability of the prescriptions of working-plans. Forty-eight current fuel coupes and 345 arrear coupes were not worked during the year owing to their inaccessibility. After completion of classification the revision of these working-plans will be taken up.

*South Arcot.*—Working of several coupes in Kallakurichi Range fell into arrears for want of demand.

*North Salem.*—In Maharajagadai, Neralakotta and Lokur Working Circles, working has been in arrears since the Madras Railway substituted coal for fuel. Faulty demarcation, delay in marking standards in areas overgrown with prickly pear and thorny creepers, and unwieldy coupes have been the causes of failure in carrying out the prescriptions of the Vanavasi and the two Shevaroys Working-plans.

*South Salem.*—Out of 31 working circles, work was carried out in only 23. Of these only ten coupes were completely felled. The failure here is due to the same causes as in North Salem.

*Trichinopoly.*—There were heavy arrears in Kulittalai and Vaiyampatti ranges at the end of the year. These ranges are accessible to good markets in Trichinopoly and Madura, but the demand has undoubtedly been affected by the war. In the Namakkal and Musiri ranges, work is very heavily in arrears and it is doubtful if these somewhat degraded areas, which are far from a market, are really capable of being worked.

*Madura.*—The war has affected the demand in this District also and even in the Kanavoipatti and Palamedu ranges there are considerable arrears. Arrear coupes to the extent of 1,579 acres were worked during the year.

*Tinnevelly.*—In this District, there are no substantial deviations but the Kopparai and Padarmalai working plans have run out, the former after a 10 years period of working and the latter after 20 years' work.

### (*b*) *Annual Plan of Operations.*

9. Besides the deviations mentioned in paragraph 8 *supra*, the other important deviations were:—*North Vellore.*—Construction of a road from the 7th mile of Vellore-Kaniambady road to Palamady reserve coupe was not undertaken and repairs to certain roads were not carried out on account of estimates having been received late from the Rangers. *South Vellore.*—Patrakad rest-house could not be completed on account of the illness of men engaged in the construction. *South Arcot.*—Buildings proposed to be constructed in Cuddalore and Kallakurichi ranges were not undertaken. *North Salem.*—The construction of the rest-house and out-houses at Anaibiddahalla was not taken up for want of a suitable contractor. *South Salem.*—The construction of three roads and one building was postponed as more important and urgent works had to be undertaken. *Madura.*—The construction of certain roads and buildings was purposely postponed as it was considered advisable to restrict expenditure as far as possible owing to the unsatisfactory financial position of this District.

## 2. Communications and Buildings.

### (*a*) *Roads and Bridges.*

10. The total expenditure on new works amounted to Rs. 6,233 and on repairs to Rs. 23,680 as compared with Rs. 16,663 and Rs. 24,457, respectively in the previous year. In *North Vellore*, the construction of the Odugathur-Melarasampet road commenced in 1913-14 was completed during the year at a cost of Rs. 1,123. In *South Vellore*, 2 miles of road from Komatiyur to Patrakad were approaching completion. Thirty-five miles of existing roads were maintained at a cost of Rs. 3,518. In South Arcot, the bridle-paths in Siruvady and Muttakadu reserved forests were extended by $2\frac{1}{2}$ miles and a cart-track to a distance of six furlongs opened out to connect the Thurinjikadu rest-house with Villipuram Local Fund Road. In *North Salem*, Billigundlu-Hogainkal road was completed and Bommiyampatti-Lokur road and the approach road to Sholapadi rest-house were commenced. One hundred and twenty four miles of existing roads were repaired. In *South Salem*, roads from Panamarathupatti to Malayalapatti, Biyarnatham to Pulikuttiramankoil, Chinnakuppam to Karkanpatti and Namagiripet to Varagur were constructed. In *Trichinopoly*, 124

miles of existing roads were repaired at a cost of Rs. 3,316, of which Rs. 768 spent on the maintenance of three Local Fund roads was recoverable from the Local Board and a sum of Rs. 524 was actually recovered during the year. In *Madura*, 145 miles of existing roads were maintained at a cost of Rs. 8,258. In addition to these 16 Local Fund roads were maintained from funds provided by the District and Taluk Boards and the Kodaikānal Municipality. In *Tinnevelly*, 93 miles of existing roads were maintained at a cost of Rs. 2,353.

### (*b*) *Buildings.*

11. During the year, the total expenditure on new buildings and on repairs amounted to Rs. 32,477 and Rs. 11,100, respectively, against Rs. 42,852 and Rs. 13,591 in the previous year. The important new works were:—*North Vellore.*—The completion of the Range office and subordinates' quarters at Odugathur and construction of compound walls to the Satghur and Arungaldrug bungalows. *South Vellore.*—Completion of subordinates quarters at Pudupalayam, part construction of Patrakad rest-house and out-houses. *South Arcot.*—Completion of the rest-house and out-houses at Thurinjikadu and part construction of rest-house in Pavunjipattu reserve. *North Salem.*—Completion of Ranger's quarters at Mecheri and Range office and Ranger's quarters at Anchetti. The rest-house at Hogainkal was completed and out-houses were added to the Sholapadi rest-house. Range quarters at Kadiampatti and a Range office at Mecheri were also taken up but not completed. *South Salem.*—The rest-house at Pappireddipatti and outhouses at Kombutukki and Kambalai were completed. Range offices at Harur and Attur, the rest-house at Cauveri peak, out-houses at Pappireddipatti and subordinates' quarters at Achankuttaipatti were taken up but not completed. *Trichinopoly.*—Construction of Range office at Turaiyur and subordinates' quarters and out-houses and stables at Sobanapuram and improvement to Sobanapuram bungalow. *Madura.*—The completion of a kitchen and stables to the rest-house at Munur and part construction of Vannathiparai rest-house and subordinates' lines at Guruvanuthu. *Tinnevelly.*—Completion of subordinates' quarters at Mundanthurai and Khansapuram, part construction of quarters at Puliangudi, Kodamadi and Pachiammankoil. Buildings for a Forest College camp at Mundanthurai were begun in July and stopped in August.

### (*c*) *Miscellaneous Works.*

12. The construction of compound walls at Anchetti and Kadiampatti in *North Salem* was carried out. An elephant trench round Vannathiparai rest-house in *Madura* was dug. *In Tinnevelly*, Rs. 437 was spent on trial borings for the construction of wells for subordinates' quarters.

Thirteen new wells were sunk and 20 old wells were deepened or repaired in the several districts of the Circle during the year.

## 3 Protection of Forests.

### (*a*) *General Protection.*

13. The following statement gives the number of offences of the year compared with the previous year:—

| Class. | Injury to "Forests" by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in the tracts in which grazing is prohibited. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. |
| Cases taken to Court .. | 10 | 6 | 1,868 | 1,936 | 682 | 778 | 159 | 130 | 2,719 | 2,850 |
| Cases compounded .. | 5 | .. | 7,197 | 7,919 | 2,747 | 2,597 | 358 | 513 | 10,307 | 11,029 |
| Cases undetected .. .. | 308 | 243 | 189 | 236 | 9 | 16 | 11 | 37 | 517 | 532 |
| Total .. | 323 | 249 | 9,254 | 10,091 | 3,438 | 3,391 | 528 | 680 | 13,543 | 14,411 |

The total number of offences reported during the year exceeded that of the previous year by 868. The increase was chiefly under the head of unauthorised felling. The increase in cases in *South Vellore* is peculiarly noticeable. The total number in reserved forests rose from 1,036 to 1,592. The increase is chiefly under the head of unauthorised felling but there is also a considerable increase in grazing cases. The increase is in all Ranges. *South Arcot* has still an unenviable superiority as regards the number of cases reported there being no less than 1,969 in the reserves alone which is 106 more than in last year.

Both these districts will probably be considerably affected, when classification has been completed and the reserves are put under panchayat management.

In *Trichinopoly*, there is a very marked increase of cases of unauthorised felling in the unreserves.

*Cases brought to trial.*

| Year. | Convictions. | Acquittals. | Percentage of failure. |
|---|---|---|---|
| | No. | No. | |
| 1913–14 .. .. .. .. | 2,690 | 166 | 5·81 |
| 1914–15 .. .. .. .. | 2,712 | 158 | 5·50 |

*Cases compounded.*

| Year. | Number of cases. | Amount. |
|---|---|---|
| | | Rs. |
| 1913–14 ... ... .. ... ... | 9,391 | 86,658 |
| 1914–15 ... ... ... ... ... | 9,657 | 84,782 |

In fixing the amount of compensation attention was generally paid to the orders contained in Government Order No. 1990, dated 13th June 1910.

14. Punishments inflicted by magistrates are reported to be satisfactory except in *North Vellore* and *Madura*. The number of cases in this Circle is far larger than in any other and a very noticeable fact is the very large percentage which are compounded. This, coupled with the fact that only one sandal case and three fire cases have been thought worthy of mention, seems to show that the bulk of cases are of a comparatively trivial character. On the other hand, it is to be noted that forest cases seem to be provocative of graver crime, for in *Tinnevelly* one guard, in *North Vellore* one guard and *South Vellore* one guard and one watcher were murdered. In addition there was one case in *North Salem* and two cases in *Trichinopoly* in which forest subordinates were assaulted. In all these cases, which ended in conviction, the subordinates were merely doing their duty. The placing of isolated reserves under panchayats will undoubtedly result in reduction of offences, but at the same time it is essential that establishments must be increased to protect the forests left in the hands of the department so that the *prevention* of petty cases may be secured.

15. Rewards to the value of Rs. 55 were given to subordinates in *South Vellore* for the detection of three cases. Rewards were sanctioned in two cases in *North Salem*.

*(b) Protection from Fire.*

16. *Special Protection.*—There was no change in the system of protection during the year. The area attempted to be protected was 1,023 square miles against 1,212 square miles in the previous year. There has been no actual reduction of the area attempted but 113 square miles in *North Vellore*, 55 square miles in *Madura* and 20 square miles in *South Vellore* were wrongly classed hitherto under Special instead of General protection.

In *South Arcot*, there is practically no fire, a fact which may be attributed to the very heavy grazing incidence and the same refers to *Trichinopoly*. *South Vellore* also shows wonderful results 99·7 per cent. being successfully protected. Here as in *North Vellore*, and *South Salem* the success is undoubtedly due to the co-operation of the Malayalees. The two districts which show up worst in the matter of protection are *Tinnevelly* and *North Salem*. The former is especially bad and this is probably due to the very thick lemon grass which prevails.

The area burnt during the year was 18·31 square miles against 24·56 square miles in the previous year. The percentage of area successfully protected during the year was 98·2 per cent. against 97·97 per cent. in the previous year. The cost per square mile of successfully protected area rose from Rs. 16–4–1 to Rs. 18–15–4.

17. *General protection* was attempted over 3,137 square miles against 2,962 square miles in the previous year. The increase has been explained above. The percentage of failure fell from 1·04 per cent. to 0·4 per cent. during the year.

18. The number and origin of fires are given in Appendix A. There were 258 fires burning 20,715 acres against 320 fires burning 35,478 acres in the previous year. This is a very good result seeing that there are 2,662,781 acres of forest in the circle. In the one case of malicious firing detected in *North Salem*, the accused was convicted and sentenced to three weeks' rigorous imprisonment. The one case of wanton incendiarism in *Trichinopoly* was also successfully prosecuted.

In *Tinnevelly*, out of 15 cases of intentional firing only one case was detected and it was in connection with this case that the forest guard was murdered. The old system of closing a block immediately it was fired is out of vogue and the long delay which is caused by fruitless enquiry followed by a nominal penalty seems to be of little use.

*(c) Protection from cattle.*

19. Eighty-three per cent. of the total area of reserved forest was opened to grazing of cattle but closed against goats. Goats were excluded from all the reserved forests from the commencement of the year.

The large area open to grazing is undoubtedly the cause of much of the offence which takes place and the forests have very little chance of improvement.

The incidence of grazing in the several districts of the circle is given below :—

| District. | Number of cattle in cow units. | Area in acres. | Number of acres per cow unit. |
|---|---|---|---|
| North Vellore .. .. .. | 1,26,687 | 2,79,680 | 2·21 |
| South Do. .. .. .. | 1,65,310 | 4,23,040 | 2·56 |
| South Arcot .. .. .. | 1,57,322 | 1,93,280 | 1·23 |
| North Salem .. .. .. | 1,34.084 | 4,71,040 | 3·51 |
| South Salem .. .. .. .. | 1,09,342 | 3,41,120 | 3·12 |
| Trichinopoly .. .. .. .. | 1,47,295 | 2,04,800 | 1·39 |
| Madura .. .. .. .. | 86,416 | 3,10,320 | 4·17 |
| Tinnevelly .. .. .. .. | 35,193 | 1,30,560 | 3·71 |
| Total .. | 961,649 | 2,403,840 | 2·5 |

These figures are sufficiently startling seeing that extensive areas are included over which no grazing is possible.

The forests of *South Arcot* and *Trichinopoly* and those of *North* and *South Vellore*, where the grazing incidence is heaviest, will undoubtedly cease to exist if this policy is persisted in.

*(d) Protection against injuries from natural causes.*

20. (1) *Prickly-pear.*—The prevalance of prickly-pear in this Circle is most noticeable. It covers large areas in *North Vellore*, *South Arcot*, *North* and *South Salem*, *Trichinopoly* and *Madura* and yet no steps are being taken for its eradication nor is it thought worthy of mention in the District reports.

(2) *Lantana.*—Lantana is very abundant in *North Salem* but no steps for eradication have been taken.

In *Tinnevelly*, it is less abundant and 100 acres in Ambasamudram have been cleared at a cost of Rs. 141. In Kuttalam, the work was neglected. It has recently spread to the Srivilliputtur range.

(3) "*Spike*" *disease.*—*North Salem.*—The cutting of infected trees in Jowlagiri did not prevent the spread of the disease and the area adjoining has now been attacked and infected trees are being removed. Two more attacks have been located in the same reserve.

The Thalli reserve also has been infected. In Tholuvabetta, 25 miles from Jowlagiri, two trees were found infected by undoubted "Spike." The District Forest Officer believes the disease to be caused by Fungi probably heteroecious.

*Trichinopoly*—A considerable areain the Kollimalais, over 100 miles from any known spiked area, has been affected. This appears to indicate that the attack is endemic. Recent enquiries show that the disease has been in existence for over two years but has not been reported. Precautions are being taken to remove all spiked trees as well as a band of healthy trees round the infected area.

*Tinnevelly*.—Signs of "Spike" are said to have been found at Kuttalam but the observation is not yet confirmed.

(4) *Damage by sambhur*.—This was noticed especially near Mundanthurai in *Tinnevelly* where sambhur are very numerous, but recently the sambhur themselves have been dying in large numbers from a foot affection which causes emaciation.

## 4. Sylviculture.

### (*a*) *Natural Reproduction.*

21. Natural reproduction from seed appears to be satisfactory wherever cattle are excluded from the reserves. On the Javadis of *South Vellore*, the reproduction of sandal is good and it has been ascertained that germination started in August. Throughout the known sandal tracts sandal appears to increase rapidly. It has now been found on the slopes of the Sirumalais in *Madura*.

Both in the Chitteris of *North Salem* and Javadis of *South Vellore* the seedling reproduction of teak, *Pterocarpus Marsupium*, *Shorea Tdlura* and other timber trees is distinctly good.

In *Tinnevelly*, the *Hopea*, *Balanocarpus*, *Vitex*, *Filicium* and *Dichopsis* produce seedlings in profusion.

Coppice reproduction is good throughout the Circle but far better in *Tinnevelly* than elsewhere. In the drier districts *Albizzia Amara* coppices rather too freely, the number of shoots detracting from their size. In these districts, *Acacia Sundra*, *Chloroxylon Swietenia*, *Anogeissus latifolia* and *Cassia fistula* are particularly good coppicers.

### (*b*) *Artificial Reproduction.*

22. *Regular plantations—North Vellore*.—Sixteen acres of teak, rosewood, acha, red-sanders, mahogany and casuarina were planted in Amerdi plantation at a cost of Rs. 892 during the year. The plantations are doing well. *North Salem*.—In the Sannyasimalai plantation, about 12,480 pits were dug and planted. About three-fourths of the plants are reported to be thriving. These small plantations without any definite object are to be deprecated.

In the Pine plantations of *Madura* 50 acres of new planting were carried out and casualities were replaced over 510 acres but further planting will be stopped after putting in the seedlings already raised in the nurseries.

In *Tinnevelly*, the Kani Taungya plantation was continued on a small scale. About 20 acres have now been planted.

Twenty-four thousand palmyra nuts were put down in the Teri sand dunes. The working plan has run out, but will be revised shortly.

23. *Cultural operations—North Vellore*.—The operations were restricted in accordance with the policy enunciated by Mr. Beadon-Bryant. The planting in the Panamadangi reserve was as usual successful and is being extended gradually. *South Vellore*.—Redsanders seed was sown at Thaniar and Kottur but has not been a success. *South Arcot*.—Seeds of miscellaneous species were sown over an area of 1,123 acres with poor results. *North Salem*.—The result of sandalwood sowing in the Nagaramalai plantation has on the whole been a failure except in about one-fifth of the locality where the seedlings have established themselves and are doing well. *South Salem*.—Dibbling in seeds in blanks in felled coupes and planting cuttings and sowing seeds in pits in specially protected areas were continued as usual. A large quantity of sandal seed was also sown in the Upper slopes of the Shevaroys and the

result is not satisfactory owing to the failure of timely rain. Sandal seeds were also sown in selected places at an altitude of 2,000 to 2,500 feet on the Peria-Kalroyans, Pachamalais and Kollimalais and the result is reported to be partly successful. Seeds of timber and fuel species dibbled in the coupes felled in the previous year in the Attur Range were also fairly successful. *Tinnevelly.*—Seeds of the principal species were sown broad cast in felled coupes and the result was poor everywhere except in Srīvilliputtūr Range. One thousand palmyra nuts were sown in Virusampatti working circle and 65 per cent. have struck.

*(c) Operations for improvement of growing stock.*

24. In all Districts creepers and climbers affecting standards in all the felled coupes were as usual cut and removed by subordinates. The fencing of felled coupes is also usually insisted on except in *Tinnevelly* where it is unnecessary. The cutting of creepers damaging sandal has been much neglected in the past but is now being undertaken on the Chitteris and Javadis in accordance with the working plan.

The District Forest Officer, *Trichinopoly*, has recently pointed out the need for this operation in the Kollimalais.

*(d) Experiments.*

25. *Dalbergia Sissoo.—North Vellore.*—This species introduced in Amerdi plantation has given astonishing results. It has been introduced in Pichanur tope, Pinnathorai, Odugathur and Arasampet.

*Hardwickia binata—North Vellore.*—This species is thriving well in Amerdi plantation. *Tinnevelly*—four pounds of seed got from Coimbatore were sown but there was no germination.

*Pterocarpus santalinus.* Redsanders.—*North Vellore.*—This species is doing well in Amerdi plantation. *South Arcot.*—2,160 Redsanders in Salavadi and 50 in Peradikuppam reserves from 1 to 10 in height are reported to be doing well. *Tinnevelly.*—Seeds of Redsanders were sown in Rangarthirtham working circle. Forty seedlings survive and the rest were unfortunately burnt but are shooting again.

*Swietenia Mahogani and Macrophylla.*—Desultory experiments are being continued on a small scale but are devoid of interest in this circle.

## 5. Exploitation.

### *(a). System of Management.*

#### (i) Major Forest Produce.

26. The total area of forests under working-plans is 2,782 square miles. The various sylvicultural systems in force over this are shown in the following table:—

| | | |
|---|---|---|
| Clear fellings ... ... ... ... ... ... | 1 | .04 |
| Simple coppice ... ... ... ... ... ... | 183 | 6·58 |
| Selection fellings ... ... ... ... ... | 183 | 6·58 |
| Coppice with standards ... ... ... ... ... | 1,171 | 42·09 |
| Improvement fellings ... ... ... ... ... | 431 | 15·49 |
| Pastoral method ... ... ... ... ... ... | 42 | 1·51 |
| Forest for which working-plans have been prepared but not subjected to any definite working ... ... ... | 771 | 27·71 |
| | 2,782 | 100·00 |

(1) *Clear or Regeneration fellings* and

(2) *Selection Fellings.*

27. *Clear or regeneration fellings.*—Five coupes of 305 acres of casuarina in *South Arcot* and 2 coupes of 46 acres of casuarina in Tanjore were clear felled.

*Selection fellings.*—The area shown under this head is misleading as Bamboo and Sandal working form the principal items. Only three coupes are worked under regular selection fellings.

(3) & (4) *Improvement* and *Coppice fellings.*

28. *Improvement fellings.*—Six coupes of 614 acres in *North Vellore* and 1 timber coupe of 298 acres in *South Vellore* and a few timber coupes in *South Salem* were worked under Improvement fellings.

*Coppice with standards.*—The following coupes were felled under coppice with standards : 25 fuel coupes of 1,771 acres in *North Vellore*, 40 coupes of 2,497 acres in *South Vellore*, 53 coupes of 4,704 acres in *South Arcot*, 7 coupes of 1,563 acres in *North Salem*, 28 coupes of 2,740 acres in *South Salem*, 77 coupes of 3,460 acres in *Trichinopoly*, 34 coupes of 3,534 acres in *Madura*, 15 coupes of 1,337 acres in *Tinnevelly*.

*Coppice without standards.*—One coupe of 13 acres and 5 coupes of 189 acres were worked in *North Vellore* and *Tinnevelly* respectively.

(5) *Unregulated fellings.*

29. In *North* and *South Vellore*, *South Arcot* and *South Salem* unregulated fellings under the permit system were confined to unreserves. In the reserves of Kodaikanal and Palni Ranges of *Madura* selected and marked timber trees were sold for domestic requirements on payment of seigniorage fees.

(ii) Minor Forest Produce.

(1) *Miscellaneous Produce.*

30. Minor forest produce was as usual leased out. Permits were issued for manure leaves in *North* and *South Vellore*, *South Arcot*, *Trichinopoly* and *Tinnevelly*. In *Trichinopoly*, 296 maunds of Divi Divi pods were collected departmentally but could not be sold. Small quantities of cardamoms, dammer, mace and the sambhur horns were collected by the Kanis of *Tinnevelly* at a cost of Rs. 60 and realised Rs. 91½.

(2) *Extraction of fodder.*

31. Free removal of grass was allowed in *North* and *South Vellore* and *South Arcot.*

In *North Salem*, the grass in three closed coupes was sold for Rs. 86.

In *Madura*, removal of grass was allowed on permits.

In *Tinnevelly*, the Nanal and Korai grasses are much valued and are included in the minor Forest produce contract.

(3) *Hay-making.*

32. The Banavaram reserve in *North Vellore* was leased out to the Military department on payment of royalty of Rs. 2 per ton of hay removed and a sum of Rs. 303 was realised during the year against Rs. 98 in the previous year.

(4) *Grazing.*

33. The revenue derived from grazing was Rs. 1,92,251 against Rs. 2,05,053 in the previous year, a decrease of Rs. 12,802 or 6·2 per cent. The decrease was due chiefly to the closure of reserves against goat browsing in *North Vellore*, *North Salem* and *Madura.*

(*b*) *Agency of exploitation.*

(i) Departmental Agency.

34. The work done by departmental agency is now very trifling and represents barely 2 per cent. of the total outturn.

(ii) By Purchasers.

35. *Timber.*—44,005 cubic feet. Due to fall in the collection of tree value from lands assigned on darkhast in *Madura* and *Tinnevelly* and also to the non-sale of timber coupes in *Madura.*

*Fuel.*—18,02,141 cubic feet. The decrease was due to a less number of coupes being sold in *North Vellore*, *North Salem*, *Trichinopoly* and *Madura*. In *Madura* and *Tinnevelly*, trees on tank beds were only sold to a limited extent. There was also decrease in the sale-proceeds of dead trees in the unreserves disposed of by the Revenue Department in *South Vellore* and *South Salem*.

*Bamboos.*—Rs. 11,125. Due to comparatively poor yield from coupes leased out in *North Vellore*, to certain bamboo contractors in *North Salem* not having paid the instalments in time and to the major portion of sale amounts of 1914-15 coupes having been credited in the latter part of the previous year in *Trichinopoly*.

*Grazing and minor produce.*—Rs. 46,878. Due to the stoppage of trade in barks on account of war, to the closure of reserves to goat browsing in *North Vellore*, *North Salem* and *Madura*. Minor forest produce leases in *Trichinopoly* and *Tinnevelly* realised less than usual and there was a decrease in the sale of manure leaf permits in *South Salem* and *Trichinopoly* owing to increase of the seigniorage fee.

### (iii) Rights and Privileges.

36. The privileges allowed were as usual for grazing at reduced rates in *North* and *South Vellore* and removal of thatch grass to the value of Rs. 383 in *South Arcot*. Tapping of patta palmyras in reserves was allowed in *Tinnevelly*, the rent being Rs. 1,722 against Rs. 2,339 in the previous year.

### (iv) Free Grants.

37. The estimated value of free grants was Rs. 13,568 aginst Rs. 9,425 in the previous year. The increase was due chiefly to a larger supply of Korambu materials to the Public Works Department in *Trichinopoly* and to the large grants of timber made by the Revenue Divisional Officer, Tiruvannāmalai, for reconstructing burnt houses, but it was partly counterbalanced by a small decrease in the free removal of grass in *North Vellore*.

The quantity and estimated value of produce removed by right holders and free grantees are shown in the following abstract :—

| — | Timber. | | Fuel. | | Bamboos. | Grass and grazing. | Other minor produce. | Total value. |
|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Value. | Value. | Value. | |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | |
| Right holders .. .. | .. | .. | .. | .. | .. | .. | 2,105 | 2,105 |
| Free grantees .. .. | 90,493 | 7,744 | 3,984 | 254 | 308 | 3,337 | 1,930 | 13,568 |
| Grants at reduced rates .. | .. | .. | .. | .. | .. | 1.928 | .. | 1,928 |
| Total .. | 90,493 | 7,744 | 3,984 | 254 | 308 | 5,265 | 4,035 | 17,601 |

### (c) *Outturn and Sources of Forest Produce.*

38. The total outturn is given in the following statement.

| Agency of exploitation. | Timber including sandalwood in cubic feet. | | Fuel in cubic feet. | | Bamboos-value. | | Minor produce including grass and grazing value. | |
|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| | | | | | Rs. | Rs. | Rs. | Rs. |
| By Government agency .. | 21,605 | 19,338 | 64,207 | 62,294 | 277 | 201 | 706 | 531 |
| By purchasers' .. .. | 964,871 | 920,866 | 6,579,693 | 4,777,552 | 1,12,914 | 1,01,789 | 4,29,093 | 3,82,215 |
| By right holders .. .. | .. | .. | .. | .. | .. | .. | 2,389 | 2,105 |
| By free grantees .. .. | 47,810 | 90,493 | 26,689 | 3,984 | 46 | 303 | 3,677 | 5,267 |
| Total .. | 1,034,286 | 1,030,697 | 6,670,589 | 4,843,830 | 1,13,237 | 1,02,293 | 4,35,865 | 3,90,118 |

The variations have already been explained. The rates for grazing fees levied in the several districts are shown in Form No. 74. The number of animals licensed on payment was 1,267,224 against 1,282,494 in the previous year.

## CHAPTER III.—FINANCIAL RESULTS.

39. The revenue and expenditure of the year are compared with those of the previous year and the average of the preceding quinquennium in the following abstract :—

| — | 1914-15. | 1913-14. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 12,45,251 | 13,01,343 | 13,76,476 |
| *Expenditure.* | | | |
| A.—Conservancy and works including refunds | 2,38,364 | 2,79,752 | 3,93,334 |
| B.—Establishments) .. . | 3,84,569 | 3,77,947 | 3,52,588 |
| Total Expenditure .. | 6,22,933 | 6,57,699 | 7,45,922 |
| Surplus .. | 6,22,318 | 6,43,644 | 6,30,554 |

Compared with the previous year there was a decrease of Rs. 56,092 under revenue and Rs. 34,766 under expenditure. 49·7 per cent. of the total revenue was derived from major produce, 40·7 per cent. from minor produce and 9·6 per cent. from miscellaneous sources. Of the expenditure 42·4 per cent. was devoted to the upkeep and improvement of the forests, 2 per cent. to exploitation and 55·6 per cent. to miscellaneous items. The proportion of net to gross revenue rose from 49·5 per cent. to 50 per cent. The outstanding revenue at the close of the year was Rs. 2,72,800 of which Rs. 37,837 fell due within the year. The estimated value of timber and other produce at sale depots at the close of the year was Rs. 51,851 against Rs. 78,409 at the commencement of the year showing a decrease of Rs. 26,558.

### Receipts.

The chief variations are shown below :—

(i) *By Departmental Agency.*

*Sandalwood.*—Rs. 20,756 due to bad prices and less quantity sold on account of war.

(ii) *By purchasers.*

*Timber* — Rs. 9,455—*vide* paragraph 35 *supra.*

*Fuel* + Rs. 25,905. There would have been a large decrease but for sale of disafforested Casuarina plantations in *South Arcot* and *Tanjore* which realised large sums.

*Bamboos* — Rs. 8,859
*Grazing* — Rs. 12,802
*Minor produce* — Rs. 31,130
} due to reasons explained in paragraph 35 *supra.*

### Expenditure.

*A.* " *Conservancy and Works* ".

The expenditure was less than that of the previous year by Rs. 41,388. The decrease was due chiefly to the cessation of departmental operations, the decrease of commission paid to permit issuing officers owing to reduced collection under II (*d*) and II (*e*), the non-execution of road and building works and to the curtailment of expenditure under planting operations.

*B. "Establishment."*

The expenditure exceeded that of the previous year by Rs. 6,622. The increase was due mainly to the employment of the Special Working Plans Officer and his establishment throughout the year.

## CHAPTER IV.—ADMINISTRATION.

40. *Circle charge.*—Mr. J. S. Battie held charge of the Circle up to 2nd November 1914 and retired from service; Mr. P. M. Lushington assumed charge of the Circle from the same date.

During the year Mr. F. J. Marshall was appointed as Forest Engineer and was posted to the work of roads in the *South Vellore.*

Mr. R. B. Cornwell, Extra Assistant Conservator, was posted to working plans.

The Special Deputy Collector's appointment in *Madura* ceased as the work was finished.

*New ranges—South Salem.*—The division of Harur North and South Ranges into three Ranges was sanctioned during the year in G.O. No. 3671, Revenue, dated 16th December 1914 and the third Range called Chitteri Range was formed from 8th April 1915. *South Vellore.*—An additional Range, contemplated many years ago, in the Javadis was formed during the year and called Santhavasal. The large and important Range of Tirupattur requires sub-division. *Madura.*—Proposals are under consideration for the formation of a third Range by sub-dividing the existing Palamedu and Kanavoipatti Ranges. *Trichinopoly.*—The reduction of the existing number of Ranges is under consideration.

*Establishment.*—During the year one Ranger in *South Salem* for the Chitteri Range, five temporary Deputy Rangers for *Working Plans* and three for Sandalwood operations, in *North Salem* were sanctioned. Mr. Cornwell was confirmed as Extra Assistant Conservator and Mr. J. A Aranha, Ranger, second grade, was promoted to Extra Assistant Conservator and posted to the Madras Forest College. The proposals for the reorganisation of subordinate staff, which were under consideration during the year, have since been submitted.

41. *Work of superior officers.*—The work of all District Forest Officers has been favourably reported on by the Collectors of the district. I specially call attention to Mr. H. A. Latham's untiring zeal in dealing with wrong settlement and wrong demarcation. Mr. C. C. Wilson, Working Plans Officer, has been indefatigable and his careful enumeration of sandal trees in the Javadis and North Salem Hills are worthy of the highest commendation. M.R.Ry. Rai Sahib E. C. M. Mascarenhas Avargal has been most successful in his dealings with the Malayalees on the Chitteris of *South Salem.*

42. *Executive staff.*—The work and conduct of the Rangers was good on the whole but there are several men who, in spite of their training, are incapable of dealing with the elementary rules of Sylviculture and the simple prescriptions of working plans.

The best Rangers of this Circle appear to be C. M. Belliappa, K. L. Muniswami Ayyar, E. Dawson, R. E. Lemos and R. Manickam.

One Ranger committed suicide in *South Vellore.* No Rangers were dismissed but one was reduced and one suspended.

The Deputy Rangers were fairly satisfactory as a class.

43. *Protective staff.*—The conduct of the protective staff is reported to be unsatisfactory in all districts except *Madura* and *Tinnevelly.* There were 211 removals or dismissals, 115 suspensions and three reductions in this class.

44. *Ministerial establishment.*—Generally reported to be satisfactory.

45. *Health of establishment.*—Reported to be generally good except in the Pachamalais, Kollimalais and Javadis. One Forester in *South Vellore* and one forest guard in *Trichinopoly* died of Malaria. In *North Vellore*, one guard was murdered while detecting a case of illicit grazing, *in South Vellore*, one forest guard and one watcher

were murdered by the Malayalees of the Inner Javadis while detecting a goat browsing case and in *Tinnevelly*, one forest guard was murdered while detecting a case of intentional firing of reserves.

46. *Relations between Revenue and Forest officers* reported to be cordial throughout the circle.

47. *Service books* were maintained and verified in all districts.

48. *Conservator's inspections.*—The Conservator was on tour for 158 days. All the districts except Trichinopoly and South Arcot were visited and the offices of these districts inspected. Inspection notes were written for Tinnevelly and North Salem.

49. *Touring of District Forest Officers.*—The minimum period of touring required was exceeded in all districts except *Tinnevelly* where the deficiency was slight.

50. *Inspection of Range offices.*—All the Range offices were inspected during the year.

51. *Audit of accounts of District Forest Offices.*—The accounts of all the districts were inspected by the Assistant Inspector of Local Fund Accounts and the result was generally satisfactory.

52. *Imperial Forest College, Dehra Dun.*—One probationer was under training in *Tinnevelly* and deputed to the College during the year. One of the probationers deputed from this Circle has since returned from the College and posted to this Circle.

53. *Madras Forest College, Coimbatore.*—Two Rangers and one Deputy Ranger returned from the College, one Ranger with honours and distinction and the other two with higher standard certificates. Five are under training and five Deputy Rangers have been deputed for 1915-17 course.

54. *Vernacular Training School.*—The continuance of the school was sanctioned in Government Order No. 227, Revenue, dated 25th January 1915, for a further period of three years. Students from *Chingleput* district were deputed to this Circle as the school in Central Circle is Telugu. The remaining candidates were selected from *Trichinopoly* and *Tinnevelly*. Out of 29 students selected, two were sent back on account of ill-health and poor work and of the remaining 27, 12 obtained first class, 10 second class and the remaining five third class certificates. The control and management by the Instructor M. Pakkyanathan is reported to be exceedingly good.

## CHAPTER V.—GENERAL.

55. *Realization of Revenue from the usufruct of toddy-yielding trees.*—The revenue realized was 10,279 against Rs. 10,251 in the previous year. The fixed fee system continued to be in force. In *South Salem*, the usufruct of trees not taken up under the fixed fee system was as usual leased and the amount realised was Rs. 3,276 against Rs. 3,162 in the previous year.

56. *Measures adopted to encourage the growth of manure leaf yielding trees and shrubs.*—In *Trichinopoly*, a small quantity of Sesbania Aculeata was sown in one of the padugais and the seed supplied to the Agricultural Department. From *South Salem*, it is reported that a good start has been made this year with Daincha cultivation in Attur taluk. In *South Arcot*, agricultural pamphlets were distributed to leading ryots and the advantages of growing green leaf manure were explained by the Revenue officials; but the ryots were slow in taking advantage of the instructions. In the meanwhile the forests of several districts notably *North* and *South Vellore* are being spoilt by the pernicious practice of issuing licenses for manure leaves.

57. *Grant of cowles for the formation of Casuarina Plantations in sandy areas.*—No applications were received. In *South Arcot*, the disafforested land is being planted by the purchasers with casuarina on an extensive scale.

58. *Cultivation in reserved forests.*—Leases of the previous years were renewed in *South Vellore*, *North and South Salem*, *Trichinopoly* and *Madura*. *In North Salem*, the settlement of the Biligundlu fishermen in 75 acres of Natrapoliem reserved forest has not yet been effected. In *Trichinopoly*, the right of cultivating korai grass in

the Lalapet reserve was leased for five years during the year at Rs. 515 per annum. In *Madura* the question granting leases for lands on which cardamoms or other crops have been established, has not yet been finally settled.

59. *Improvement of water-supply in State forests.*—The scarcity of water in the hill forests of this circle is particularly noticeable in the hills of *North* and *South Salem* and in the Javadis *South Vellore*, but nothing has been done hitherto to improve the water-supply. The bunding of streams has been carried out to a small extent in six reserves in *North Vellore* but the localities do not appear to have been well chosen.

One or two tanks have been repaired but nothing to really improve the water-supply has been effected.

60. *Supply of forest produce to meet the wants of the people.*—The contract system has been in force in all the districts and contractors are usually bound to supply the wants of the people at reasonable rates. It is noticed however that the ryots do not as a rule avail themselves of these opportunities, but supply themselves from patta lands, unreserves, or by pilfering from the reserves. In both *Salem* and *Madura* there has been a decrease in the demand for fuel owing to the war having interfered with the dyeing industry.

61. *Sale of fuel at the edge of forests.*—This is generally done by coupe contractors in *North Vellore*, *Trichinopoly* and *Madura*. The fuel obtained by departmental exploitation in Musiri Range, *Trichinopoly* district, was disposed of at the edge of the forests by public auction.

62. *Arrangements made for the transfer of sale depots to private agency.*—The contract system is now fully established in all the districts of the Circle and contractors have opened depots in all important towns.

63. *Free removal of grass.*—This has been referred to in paragraph 31 *supra*. As usual the concession was largely availed of by the ryots in *North Vellore*. In *South Vellore*, free removal was permitted up to the beginning of the fire season.

64. *Hill tribes.*—The Malayalees of the Chitteris in *South Salem* and in the Chengam and Polur Javadis of *South Vellore* have given the department considerable assistance in protecting the forests from fire and in the protection of sandal and the same is the case in parts of the Kollimalais and Pachamalais of *Trichinopoly*. In the Tirupattur Javadis and in the Kollimalais of *South Salem* shifting cultivation still persists. In the latter district, the hills have been classed as assessed waste by the Settlement officer. On the Tirupattur Hills the matter is being dealt with by the Forest Commissioner.

A guard and watcher were murdered in the Tirupattur Javadis and some of the subordinates were assaulted by Malayalees in the Perumbalur range of *Trichinopoly*. In the Tirupattur-Javadis the Malayalees have been ruthless in their destruction of sandal and the Malayalees living at the foot of the Pachamalais are suspected of smuggling sandal and timber. On the whole considerable progress has been made in our dealings with this class of hillmen, though there is still room for improvement in several directions.

In *Tinnevelly* district, a settlement of Puliyars has been established at Puliyuthu. They were employed on fire line work and as patrols. At Kariar the small settlement of Kanis have raised some successful teak plantations, the plants being raised with the field crops. The area is being extended yearly and the early plantations are now well established.

65. *Prospecting licenses.*—No license was granted during the year.

66. *Timber and sandalwood transit rules.*—The rules continued to work satisfactorily and without friction. In *North Salem*, 409½ maunds of sandalwood seized last year on suspicion were released as it was not proved to be illicit removal. Two small cases of removals in contravention of the rules brought to notice by the Mysore Forest authorities were compounded. From *Trichinopoly*, the property mark of two persons were registered during the year and applications from two other individuals were rejected as they did not comply with the rules.

67. *Rules under sections 26 and 32 of the Forest Act.*—The rules under section 26 worked satisfactorily. From *North Salem*, it is reported that no attempt was made by the Revenue Officers to protect the classified growth in the unreserved lands and that steps are being taken to remedy the same.

In *Madura*, the Zamindar of Seitur on behalf of Minor Zamindar of Elumalai has applied under section 32 (*a*) of the Forest Act for the management of Elumalai forests by the Government. His application is being considered. In *Tinnevelly* the rules under section 26 were extended to the forest and waste lands in Seitur Zamin and the Ghat slopes and spurs in the Zamin were declared reserved land.

68. *Rules regarding levy of composition fees.*—Attention was paid to the proper working of the rules.

69. *Arrangements made in holding the villagers adjacent to particular forests responsible for protection of those forests by dividing the village and blocks of forests concerned.*—Very little progress has been made in this direction in the plains, but in the hills a working plan has been prepared for the Chitteris which embodies such arrangements. These principles are being extended to the Javadis.

In *South Arcot* as offences of illicit grazing and cutting were very rife in two reserves, a notice of warning was issued to the ryots that they would be closed, if they do not desist from committing offences.

### Live and Dead Stock.

70. *Live-stock.*—There is no live-stock in the Circle.

71. *Inventory of valuable stock.*—Stock registers are maintained in all districts and verified at inspections.

72. *Rain-gauges.*—Readings are recorded in all districts. In *Trichinopoly*, two new stations were opened this year in accordance with the prescriptions of the working-plan for Musiri Range. In *Tinnevelly*, a gauge was put up again at Mudaliarathu.

73. *Specimens.*—Timber specimens were sent to Conservator of Forests, Northern Circle, from *North Vellore*, *Madura* and *Tinnevelly*, in connection with the preparation of the vernacular list of trees and shrubs. Specimens of sandalwood have been sent from *Trichinopoly* and *Tinnevelly* to Forest Research Institute, Dehra Dun, for analysis of their oil value. Herbarium specimens were sent from *Tinnevelly* to the Forest Botanist, Dehra Dun.

### Suits.

74. *North Vellore.*—A boundary dispute in Gundlapalle reserve between the Zamindar of Satghur Bagayat and the Forest Department is pending inquiry with the Assistant Director of Survey. *South Arcot.*—The civil suit referred to in the last year's report was dismissed with costs, *i.e.*, ended in favour of the subordinates concerned. *Trichinopoly.*—The suit filed by Arunachala Reddi, referred to in the last year's report, was decided in favour of Government and an appeal has been preferred in the High Court.

One Subba Nadan, contractor of Thalanayar coupe VIII, has filed a suit against Government in the District Munsif's Court of Tanjore claiming damage and costs for his not having been allowed certain concessions in the working of the coupe.

A pattadar of Kulitalai has also filed a suit against Government and the contractor Kuppuswami Udayan for damage done to his patta land by the contractor by the working of the fuel coupe leased to him by the Forest Department.

*Madura.*—One Santhanatham Chetti, contractor for the tank-bed trees, has filed a suit claiming damages to the extent of Rs. 2,820 on the ground that he was not given sufficient time to cut and remove all trees sold to him by the Forest Department.

*Tinnevelly.*—The result of appeal to the Privy Council in Kuttalam water-fall suit is not yet known.

75. *Forest Committee's report.*—The classification of reserves is complete in the *North Vellore*, *Trichinopoly* and *Tinnevelly* and is approaching completion in all the other districts. In *Madura* the classification is pending with the Board.

Four reserves in *North Salem* and 26 in *South Salem* still await classification but in the latter district some revision is required.

In *South Vellore*, all reserves have been classified except those in the Tiruvannamalai Range, which have been inspected by the District Forest Officer and Conservator since the close of the year.

In *South Arcot*, a few small reserves await inspection by the Conservator, otherwise classification is complete.

*Panchayat system.*—The formation of panchayats has begun and some progress has been made in *North Vellore* and *South Salem*. In both districts the same mistake has been made of handing over a portion instead of the whole reserve to panchayats. Other difficulties have also arisen in connection with the Forest Committee's suggestions notably in handing over of very small areas to a panchayat. Such difficulties are natural at the outset but are likely to be overcome in course of time. In *Trichinopoly* one reserve has been placed under panchayat management. *Tinnevelly* is disappointing, for an effort was made to obtain panchayats but appears to have failed.

*The patrol system.*—The system has been introduced in *North Vellore*, and *South Arcot* and *South Salem*, but the present establishment is far too small to say how it is likely to work. It will be more generally introduced when the re-organization is sanctioned.

76. *Forest Conference.*—Three Conferences were held by the Forest Commissioner with the Conservators during the year, two at Madras and one at Coimbatore and various subjects on Forest matters were discussed.

OFFICE OF THE CONSERVATOR OF FORESTS,
SOUTHERN CIRCLE,
TRICHINOPOLY, *6th September* 1915.

P. M. LUSHINGTON,
*Conservator of Forests, Southern Circle.*

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## FOREST ADMINISTRATION REPORT,

### MADRAS PRESIDENCY,

WESTERN CIRCLE, 1914-1915.


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# FOREST ADMINISTRATION REPORT OF THE WESTERN CIRCLE

FOR THE

FOREST YEAR ENDING 30TH JUNE 1915.

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## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in Area.

*Reserved forests.*—The area of reserved forests increased from 4,102 to 4,138 square miles. Thirty-five square miles in *South Malabar* and a total extent of one square mile in *South Canara*, *North Malabar*, *Kollegal*, *North* and *Central Coimbatore* were transferred from reserved lands. Seven small areas aggregating 193 acres were disafforested.

*Reserved lands.*—Four hundred and sixty-three acres consisting chiefly of enclosures in reserved forests were added and 36 square miles were transferred to reserved forests. The area at the close of the year was 114 square miles, of which 96 are leased forests, and five are toda patta lands.

### 2. Forest Settlement.

2. Thirty-four blocks (47 square miles) remained to be settled at the commencement of the year, to which ten (·72 square mile) were added during the year. Of these twelve blocks (36 square miles) were transferred to reserved forests, leaving thirty-two blocks (11·86 square miles) at the end of the year. Of the latter, the actual settlement was completed for eight blocks.

### 3. Demarcation.

3. *New boundaries.*— Fifty-eight miles in *Kollegal* and nine in *Central Coimbatore* were newly demarcated at a cost of Rs. 1,102. *Already existing boundaries*—Two miles in the *Nilgiris* and 37 in *North Coimbatore* were permanently demarcated; the demarcation in the latter district was in accordance with the verification by the Special Officer; 38 miles in the same district were also repaired. The total cost incurred was Rs. 2,856. One hundred and seventeen miles in *South Canara* were stone-lined and lockspitted at a cost of Rs. 1,343; a sum of Rs. 65 was also spent in demarcating preliminarily the boundaries of a sandalwood area proposed for reservation. Five miles in *Kollegal* were stonewalled and lockspitted at a cost of Rs. 148. Fifty-four miles of line in *Central* and *South Coimbatore* were repaired at a cost of Rs. 602. In *North* and *South Malabar*, 162 and 62 miles respectively were as usual cleared for the purpose of fire protection, the cost being debited to that head. The length of boundaries cleared or repaired free of cost by subordinates is reported to be 695 miles. In *South Canara*, the *Nilgiris* and *Kollegal*, the subordinates continued to clear and maintain boundaries as part of their normal work, but no accurate record of the results was kept. The demarcation of the new boundary between the *Nilgiris* and *Central Coimbatore*, the object of which is to transfer the lower half of the Nilgiri slopes to *Central Coimbatore* was started in April last. The work which has been inspected by me is in the hands of an Extra Assistant Conservator on special duty for the purpose, assisted by a Surveyor on Rs. 100+25 (hill allowance). It is of the most arduous and tedious character owing to the climate, the labour difficulty, the precipitous slopes to be traversed and the obliteration of the old survey marks which have to be identified by the Surveyor and are often completely buried under

the wash from the slopes. The first 87 chains was done in $2\frac{1}{2}$ months and together with the pay and allowances (exclusive of travelling allowance) of the officers mentioned has cost Rs. 1,340 or at the rate of Rs. 1,232 per mile. The work is estimated to take about two years. To hasten its completion the District Forest Officer has asked for two more surveyors. The sanction of this work arose out of a scheme for supplying the Nilgiri Railway with fuel from the lower slopes to be transferred to *Central Coimbatore*. The line however almost immediately took to using coal and now I see no advantage in carrying out the transfer—rather the reverse.

### 4. Forest Surveys.

#### (*a*) *By the Survey of India Party.*

4. During the year, no surveys were undertaken.

#### (*b*) *By Departmental Survey.*

5. The survey of timber, fuel and bamboo coupes of the year was carried out departmentally. So were the traces of two bridlepaths in *Kollegal* and *Central Coimbatore*, the alignment of two roads in *Kollegal* and *South Coimbatore* and some miscellaneous items in connection with the fencing of boundaries. The special officer deputed by the Madras Survey Department for the estates on the Anamalais has surveyed 12 square miles and his services will have to be continued for another season. He will resume field work in November 1915.

#### (*c*) *Maps.*

6. *Reference maps under section* 80 *of the Madras Forest Code.*—These are reported to have been maintained except the range reference maps in *Kollegal* and *South Coimbatore*.

*Special District Reference Maps—Preparation.*—The Forest Map Officer completed the maps of *Ganjām*, *Kistna* and *Nellore* and prepared those of *Vizagapatam*, *Lower Gōdāvari*, *Guntūr* and *North Malabar*. He has yet to prepare the map of *Upper Gōdāvari* and redraw the maps of *Cuddapah*, *Salem*, *Madura*, *Ramnad* and *Tinnevelly* with reference to the alterations of the boundaries of forest divisions. His services have been extended up to end of March 1916 by which time, it is hoped, that the preparation of these reference maps will be finished. *Progress in publication.*—According to the progress statement furnished by the officer in charge, Forest Map Office, Dehra Dun, which relates to this Circle, the maps of *South Canara* and *North Coimbatore* were published and the map of *South Malabar* will shortly be printed. The *Nilgiri* map which was reported last year to be in the press has not yet appeared.

## CHAPTER II.—MANAGEMENT OF STATE FORESTS.

### 1. Regulation of Management.

#### (*a*) *Preparation and Control of regular working plans.*

7. *Preparation.*—There was no Working Plans staff in the Circle. The working plan for the eucalyptus plantations in the *Nilgiris* and the subsidiary plans for the manufacture of charcoal in the Newman and Muthinad plantations were sanctioned during the year. The collection of statistics for preparation of a working plan for Gundal bamboo working circle in *Kollegal* continued; the tentative working in Doddahalla valley bamboo working circle was stopped owing to the flowering of the stock. A valuable report on the Tekadi leased forests was prepared by Mr. C. E. C. Fischer, the District Forest Officer. Besides an historical record, it embodies a reconnaissance survey of the forests and suggestions for working which will be of great assistance for the working plan when this is taken up.

*Revision.*—Statistics for the revision of the working plans for the forests of Coondapur and Sankaranarayana ranges in *South Canara* and of Begur and Chedleth in *North Malabar* have not been completed. The revision of the working plans for the forests of Mettupalayam range and for Tadagam reserved forest has just been completed. Mr. Habibulla Sahib, Extra Assistant Conservator, is engaged in this work. The revision of the working plan for the forests of Erode range could not be attended to owing to changes of officers in charge of *Central Coimbatore* division.

A survey by the Survey of India and an allotment of staff have been arranged for the preparation of the final working plan of the Nilambur teak plantations which will be started by Mr. R. Bourne after the present north-east monsoon.

*Control.*—The following were the important deviations:—*South Canara.*—The exploitation in Chittur, Bakudi, Chinkramale and Durgamale fuel and Uppinangadi timber working circles is behindhand chiefly for want of demand. Narimogar fuel coupe II was not worked as coupe I was not completed. The exploitation in Mulliar fuel working circle having fallen in arrears, the period of rotation was extended and the coupes were rearranged. *North Malabar.*—The work in Begur coupe is in arrears; sub-coupe C commenced last year and coupes D and E of coupe XVIII were completed. *South Malabar.*—Thinnings in Edacode and Karumpoya and clearing parasites in Edacode plantations were not completed. *The Nilgiris.*—The improvement fellings in Mudumalai working circle were resumed, the old stock of timber having been disposed of. The prescriptions of the plan for plantations were carried out except certain minor works. *Kollegal.*—The work in Araipalayam fuel working circle is backward owing to exploitation of smaller areas for want of demand. The first rotation for the sandalwood areas in Bailur and Madeswaranmalai was over in 1910-11. The rest of the plan has been broken up by the appearance of spike disease and the havoc resulting from it. The sandal working plan in *North Coimbatore* remained in abeyance for the same reason. *Central Coimbatore.*—The areas under the hay working circle in Erode range were transferred to the management of panchayats. Bamboos were not extracted from Sholakarai and Walayar working circles as per prescriptions of the working plan owing to the appearance of general seeding followed by the death of the whole stock; but dead bamboos were removed from certain areas. The Bolampatti working plan except for the Chinnar working circle was unworkable. *South Coimbatore.*—The Talinji working plan was set aside pending revision, and felling in the Varigali valley was stopped pending the construction of export road. The size and location of coupes in the fuel working circles has not been followed for many years for want of demand for the produce.

### (*b*) *Preliminary Working Plans Reports.*

8. *South Canara.*—The preparation of a working scheme for the extraction of overmature timber in 48·95 square miles of ghat forests exploitable by the Kasaragod river was completed by Mr. Hart, Extra Assistant Conservator, and it has since been sanctioned. Systematic working was continued in one bamboo and three fuel coupes in *Kollegal* and nine fuel, ten bamboo and three sandalwood coupes in *North Coimbatore.* But as yet there are no working plans for these areas.

### (*c*) *Annual Plan of Operations.*

9. The following were the important deviations besides those mentioned under (*a*).—*South Canara.*—Mulliar coupe road was not constructed as the produce was floated. The construction of Range quarters at Coondapur and of subordinates' lines at Koliumoguru was postponed as funds were required for other works. The Deputy Ranger's quarters at Herur were not constructed owing to delay in the acquisition of site. The stone-lining of some of the forests was not undertaken pending verification of boundaries. *North Malabar.*—A well at Tholpatti was not sunk, and some demarcation of forests was not carried out owing to discrepancies in boundaries. *South Malabar.*—Serambi and outhouses at Erambadam were not constructed as they are now considered unnecessary. *The Nilgiris.*—The construction of subordinates' lines at Kargudi was postponed for want of labour, also a road in Coonoor peak plantations, as the estimate was not ready. *Kollegal.*—Araipalayam-Gundal bridle path was not constructed for want of funds and the subordinates' quarters at Mathipuram, pending revision of establishment. The building of a rest house at Doddasampagai was postponed and will perhaps be cancelled. Fencing the compounds of certain rest-houses and the fire protection of Gundal valley were not taken up for want of establishment. *North Coimbatore.*—Onnaitittu and Ullurthanda coupes were not exploited for want of demand. The following works were not carried out for want of funds and establishment:—Tracing and estimating for Kanavoicombai-Ugnium and Kavalur-Gundri bridle-paths, extension of Hassanur-

Hulikerai road, repairs to certain roads, rest-house at Chennampatti, subordinates' lines at Bailathur, Chennampatti and Ullurthanda, wells at Jeergahalli, Chennampatti and Ullurthanda, demarcation of North Bargur and acquisition of minor enclosures in Gutialattur. *Central Coimbatore.*—Improvement fellings in Tadagam and Mettupalayam forests were not carried out the working plans not having been sanctioned; some of the fuel coupes were not sold for want of offers. Inspection shed at Sottayur and Anaimulli-Chindakki bridle-path were postponed in accordance with the provision in the quinquennial scheme. Anaiarkandi-Muthikolam bridle-path was not undertaken the trace not having been made. The demarcation of Anaikatti forest was not done as it was not notified under section 16 of the Forest Act. *South Coimbatore.*—Coupe XXIII of Tekadi leased forest was not felled as coupe XXI was not completed. Subordinates' lines in the Varigali valley and at Pothumadai and Deputy Ranger's quarters at Tekadi were postponed in favour of urgent works. Elephant kraals in the Varigali valley were not constructed for want of labour as well as the dams in the Amaravati valley owing to change of rangers. The Mount Stuart ghat road was not commenced as the investigation and preparation of estimates by the special Forest Engineer were not completed. Apart from finishing the incomplete works of the previous year the following chief works were carried out *though not provided in the Plans of Operations. South Malabar* — Carrying out experiments and observations regarding reproductive power of bamboo, improvement of a channel from Nilambur to Karumpoya for floating purpose, construction of Ranger's quarters at Nedungayam, reconstruction of Nellikutta serambi and repairs to Chanakundumukku-Mundakadavu road. *North Coimbatore* —Felling fuel in certain coupes which were in arrears and sandalwood in Mavahalla coupe VI. *Central Coimbatore.*—Opening of a bamboo coupe in Chenat Nair reserved forest. *South Coimbatore.*—Construction of subordinates' lines at Palar and of outhouses at Attaikatti and eradication of lantana.

## 2. Communications and Buildings.

### (*a*) *Roads and bridges.*

10. The amount spent under this head was Rs. 47,303 against Rs. 45,251 in the previous year; of the former, a sum of Rs. 25,155 was spent on new works and the balance on repairs against Rs. 23,180 and Rs. 22,071 respectively in 1913-14. *Important new works of the year—South Canara.*—Construction of Haladi-Rattadi and Herur-Hulimeshpare roads 8¼ miles. *North Malabar.*—Construction of a cart-track from Mysore frontier to Bavali, 3 miles of Brahmagiri-Ampalaparai bridle-path and bridges on the Kottiyur road. *South Malabar.*—Construction of 5 miles of a bridle-path in the Silent Valley. *The Nilgiris* —Mudumalai—Torapalli road was commenced; construction of a cart-track and an inspection path in Cairnhill plantation; commencement of Mudumalai-Doddakatti bridle-path. *Kollegal.*—Improvement of Hossore-Ponnachi bridle-path (14 miles). *North Coimbatore.*—Eight and three-fourths miles of ghat roads at a cost of Rs. 7,351 were completed. *South Coimbatore*—Construction of a cart road to tap Punachi working circle and completion of Muttialkanavoi-Manthorai cart road.

*The work of Forest Engineer.*—This officer arrived in this circle in November 1914 and works under the direction of the Superintending Engineer, IV Circle, Public Works Department. He was first engaged in revising an estimate for the new Mount Stuart ghat road—a distance of about 5 miles. This necessitated checking and inspection of the trace. A considerable improvement was made in the alignment of the road and an estimate costing Rs. 31,000 was prepared against the previous one of Rs. 73,309. This work was finished about the close of May 1915. The designs and estimates having since been found faulty and incomplete by the Superintending Engineer, are being revised. He was also engaged in checking the Tekadi tram trace. A continuous trace up the ghat as an alternative to the "inclined plane" was attempted and proved successful. The cost of the two investigations including the pay of the Forest Engineer and the cost of his establishment as debited in the accounts of the Public Works Department amounted to Rs. 6,894. Owing to the unhealthiness of the localities, there were constant interruptions and progress was not satisfactory. One of the subordinates died and another had to be sent away on leave.

*Tramways—South Coimbatore.*—The tramway in Tekadi leased forest was extended. The year's working showed a net profit of Rs. 2,416 against a loss of Rs. 754 in the previous year. All the bullocks having been engaged in carting timber to the plains, the buffaloes and a few pairs of hired bullocks were used in tramming. The outturn of work during the year was 4,328 ton miles against 2,105 in the previous year and the working charges decreased from Rs. 2-10-2 to Rs. 1-9-9 per ton mile.

*(b) Buildings.*

11. The expenditure on new buildings amounted to. Rs. 30,799 and on repairs and maintenance to Rs. 10,667; the figures for the previous year were Rs. 27,776 and Rs. 12,114 respectively. The principal new works of the year were—*Rest houses*—two at Poochipara and Tiruvizamkunnu in *South Malabar* and one each in *Kollegal* and *North Coimbatore* commenced last year were completed. One was constructed in *Kollegal* and three were in progress in *North Coimbatore*. *Serambis*—Doddakatti camp in the *Nilgiris* was completed. *Inspection sheds, store houses, etc.*—Commencement of one inspection shed in *South Canara*. A depot office and store room at Beypore in *South Malabar* was constructed. *Range offices*—Two in *South Canara*, one each in *North* and *Central Coimbatore* commenced last year were completed. *Range quarters.*—Completion of one each in *South Canara* and *North Coimbatore* and commencement of one in *South Malabar*. *Subordinates' lines.*—Completion of two sets in *North* and *South Coimbatore*; two were also in progress in the former; construction of one set each in *Central* and *South Coimbatore*; one in the *Nilgiris* was commenced.

*(c) Miscellaneous works.*

12. The chief works of the year were—sinking two wells in each of the *South Canara*, *South Malabar* and *Kollegal* divisions; three were completed and four in progress in *North Coimbatore*. Dams were constructed in the Kolvalli and Bavali rivers in *North Malabar* and the floating channel from Nilambur to Karumpoya in *South Malabar* was improved. The botanical garden at Manantoddy in *North Malabar* was fenced. The tank at Kaikerai in Gutialattur reserved forest in *North Coimbatore* was repaired. The total expenditure incurred during the year was Rs. 8,181.

In accordance with the advice of Mr. Beadon-Bryant, late Inspector-General of Forests, a scheme for construction of roads and buildings in the circle for the quinquennium commencing from 1914-15 was prepared, and approved tentatively by the Board of Revenue after the close of the year.

*Telephone.*—The telephone service in *South Coimbatore* had frequent interruptions. Additional facilities to keep the service in order have since been promised by the Telegraph department. When the line was in working order, it was useful.

3. Protection of Forests.

*(a) General Protection.*

13. The year's offences are classified and compared with those of the previous year in the following statement:—

| Class. | Injury to forest by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in tract in which grazing is prohibited. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14 | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| Cases taken into Court .. | 25 | 11 | 388 | 420 | 112 | 152 | 80 | 75 | 605 | 658 |
| Cases compounded .. | 62 | 54 | 1,911 | 1,693 | 455 | 474 | 214 | 233 | 2,642 | 2,454 |
| Cases undetected .. | 331 | 133 | 21 | 31 | .. | 15 | .. | 2 | 352 | 181 |
| Total .. | 418 | 198 | 2,320 | 2,144 | 567 | 641 | 294 | 310 | 3,599 | 3,293 |

Note.—It is reported that one of the Revenue Divisional Officers in *Central Coimbatore* has not furnished the return of offences dealt with by him.

The only variation calling for remark is the decrease under "injury by fire," which was due to an exceptionally favourable season. The action taken last year for the suppression of sandalwood thefts in *South Canara* appears to have been effective so that very few cases were reported in the current year. There was some increase under "illicit grazing" in the *Nilgiris*, attributed to the introduction of revised regulations for grazing and to the closure of the Wenlock Downs to free grazing. Several breaches of the new regulations were let off with warnings.

The number of offences prosecuted during the year was 658 and there were 140 pending from last year. Out of a total of 798 cases, 683 were disposed of during the year and 115 remained pending. The 683 prosecuted cases resulted in 624 convictions, 58 acquittals and one withdrawal; the percentage of conviction was 91 or about the same as in the previous year. The punishments inflicted by Magistrates are reported to be generally satisfactory. A most important case of theft of timber on a large scale in *South Malabar* in which a ranger was also suspected of having connived was prosecuted and resulted in the acquittal of the accused for want of evidence. An action is now pending against the ranger.

*Offences Compounded.*—The number of cases compounded and the amount of fees realized were 2,041 and Rs. 23,488, respectively, against 2,422 and Rs. 35,793 in the previous year. The decrease was mainly due to the suppression of sandalwood thefts already mentioned in *South Canara*. There was also some fall in the number of reported offences in unreserved lands in *Kollegal*, *North* and *Central Coimbatore*.

*Working of the rules for compounding grazing offences.*—The rules were followed in the *Nilgiris* and *Coimbatore* and are reported to have worked well. They were not adopted in *South Canara* and *Malabar* as there was no necessity.

*Holding adjacent villages responsible for commission of offences in particular forests —North Malabar.*—The ryots of one of the villages adjoining two blocks of forests were warned that the occurrences of fires would involve the closure of grazing areas. The notifications issued in previous years on the subject were in force in *Kollegal* and *North Coimbatore* and there was no occasion to enforce the penal conditions. *Central Coimbatore.*—There was a large number of illicit fellings in blocks II and III of Bolampatti and the adjoining villagers were warned of the closure of the forests to grazing. The warning is said to have brought down the number of offences. *South Coimbatore* —Nothing was done on the ground that the forests are away from all villages but evidently they were not distant enough to prevent offences being committed. The system is not workable in *the Nilgiris* and is not required in *South Malabar*.

14. *Rewards—South Canara.*—Rewards amounting to Rs. 47 were granted to two deputy rangers and a guard for detecting thefts of timber and illicit shooting, Rs. 5 to a village potail for detecting a case of illicit transport of sandalwood and Rs. 20 to two tannahdars for reporting cases of illicit transport of timber; also Rs. 70 to informers. *The Nilgiris.*—The Game Association paid Rs. 20 to a ranger and Rs. 10 to two guards for detecting a case of poaching. *Kollegal.*—A Police head constable was rewarded Rs. 4 for his help in detecting a case of illicit removal of produce. *North Coimbatore.*—Rs. 29 to seven persons in two cases of removal of timber and fuel. *Central Coimbatore.*—Rs. 32 to three guards and one watcher. *South Coimbatore.*—Rs. 38 to six persons in two cases of illicit shooting.

### (*b*) *Protection from Fire.*

15. *Special protection.*—The usual measures were adopted for the protection of forests. The year was specially a favourable one due to early rains. The area in which protection was attempted during the year was 1,139 square miles against 1,129 in the last year, the increase being due to extension of protection to additional areas chiefly in *South Canara* and *North Coimbatore*; the percentage of successful protection was 99·2 against 90·4 in the previous year. As in last year, the assistance of hill tribes in *South Coimbatore* was enlisted and the attempt was more successful; they earned a reward of Rs. 177 for their services. The expenditure per square mile of area attempted to be protected was Rs. 24–3–6 against Rs. 26–3–6 in the previous year.

16. *General protection.*—The area attempted was 2,482 square miles against 2,494 in the previous year; the decrease was due to transfers to special protection. The percentage of failure was 1·4 against 6·7 in the last year. The reporting of fire occurrences in these areas continued to be unsatisfactory.

17. The number and origin of fires during the year are given in appendix A. The number of fires decreased by 59 per cent. and the area burnt by 83 per cent.

The results in *North* and *South Coimbatore* and *Kollegal* leave room for much improvement. These divisions were responsible for 26,500 acres out of a total of 29,300 acres burnt. On the other hand, the valuable forests in *North Malabar* and Mudumalai in *the Nilgiris* which sufferred severely last year were successfully protected.

(*c*) *Protection against Cattle.*

18. Goats are not allowed to browse in forests. Fourteen per cent. of the total forest area was closed to all animals throughout the year and 75·9 per cent. open. Eighty-four square miles closed in the previous year as communal punishment in *Kollegal* were thrown open and 44 square miles in *North Coimbatore* consisting of areas under exploitation and the Minchiguli valley with a view to protection of timber therein were closed. The number of animals impounded compared with the figures of the previous year and the average of the past three years is given in appendix B. The number of impoundings increased from 8,933 to 9,338; the increase was chiefly in *the Nilgiris*, that in *Central Coimbatore* being ascribed to better supervision; there was also a marked decrease in *South Coimbatore* which is attributed to the transfer of certain areas to the management of panchayat.

(*d*) *Protection against injuries from natural causes.*

19. *Spike disease in sandal.*—A survey of the spike areas in the Bailore working circle, *Kollegal*, was carried out under the direction of the Conservator. From the margin of the attacked area and outside it a belt—100 yards in width—was demarcated throughout the working circle; and within the belt every sandal tree and plant was uprooted. These were naturally all healthy individuals. Within the belt all zizyphus, which carries a disease similar if not identical with spike, was also eradicated. The idea was to isolate the healthy sandal outside the belt from the possibility of infection through either root contact or the carriage of the disease by insects. The work was begun in February and completed by May. It is still too early to judge of the efficacy of this measure, but up to the time of writing there have been no instances of the disease crossing the line. If immunity is continued for the space of twelve months from the time of clearing there would be fair reason for hoping that this measure is at any rate a check upon the spread of spike, but at least two years of immunity should be obtained before it could be claimed that it stops the disease. In other areas of *Kollegal* and *North Coimbatore* spike has continued to spread throughout the working circles.

*Lantana.*—In May 1914 standing orders were issued for the preparation of working schemes where necessary, providing for three successive annual clearings of lantana commencing with the current coupes and compartments of areas under working plans. The orders have been carried out and schemes have been sanctioned in the *North Malabar* and *South Coimbatore* divisions. In other divisions, eleven acres were cleared in fuel coupes in *South Canara*, 118 acres in the plantations in Nilambur, and 65 acres of fuel coupes in *Central Coimbatore*.

*Prickly-pear.*—Orders for the preparation of similar working schemes for the eradication of prickly-pear have lately been issued. One hundred and forty acres have been cleared in four fuel coupes in *North Coimbatore*, and in *Central Coimbatore* there have been clearings in coupe VII of Odanthorai working circle and in the Kanjikoil reserve.

*Teak defoliator.*—Owing to timely rains the Nilambur plantations were almost free from attacks during ten months of the year; but in May and June 1915 extensive attacks were experienced in the young plantations of Neuungayam in the course of which six plantations were almost completely defoliated. The attack was also fairly

severe in several plantations in Nilambur range. Experiments were tried with two Andre Maire traps but one was soon destroyed by elephants and the other was probably not correctly adjusted as it failed to attract moths.

## 4. Sylviculture.

### (*a*) *Natural Reproduction.*

20. The seeding of the large bamboo (*Bambusa arundinacea*) is spreading. The final seeding commenced in the plateau tracts from the north about two years ago and spread southwards. Practically the whole of the Wynad in *Malabar* and *Nilgiris* has seeded as has *Kollegal* and *North Coimbatore* and the lower slopes of the *Nilgiris* in *Central Coimbatore*. Upon the ghats in *South Canara* and *Malabar* all the upper slopes have gone, and sporadic seeding is extending to the heavy bamboo jungles at the foot. Partial seeding has been going on down here for two or three years. It is impossible to say, although it is probable, that a general seeding will follow. If so it will be a serious thing later for the timber floating industry and will interfere for some years with any bamboo pulping schemes. As regards other species, the germination of *Xylia dolabriformis* on laterite tracts and of *Hopea parviflora* in the Canara valleys was exceptionally promising as was that of Rosewood and *Pterocarpus Marsupium* in the Minchiguli valley, *North Coimbatore*. And on the whole the year was generally more favourable than the preceding one.

### (*b*) *Artificial reproduction.*

21. *Regular plantations.—North Malabar.*—Two acres were added to the Begur teak plantation. In the *Nilgiris* the experimental plantations of timber-yielding *Eucalyptus* were maintained but nothing else is reported about them. In *South Coimbatore* there was no extension of the Karianshola plantations but the teak, rosewood and vengai plants put out to replace casualties in the rains of 1914 survived the hot weather owing to the favourable season. The regeneration operations prescribed by working plan in Punachi and the fuel working circles were unfortunately failures. In *Central Coimbatore* 13,398 pits were sown and 7,000 basket plants were put out in various fuel working circles, again without success. There has been a consistent record of non-success with these operations in *Central Coimbatore* owing probably to their unsuitability to such dry forests and orders will be issued to discontinue them.

*Taungyas—South Canara.*—In Kasaragod range 41 acres and 41 acres in Coondapur were given out for Kumri to forest labour but results are not reported. *North Malabar.*—In Kanoth the Kurichiyars were given 210 acres, whilst in Begur 65 acres were granted to Kurumbers. Of this only 9 acres were felled and sown with teak, but here again results have not been reported. Attempts are to be made to settle Kurumbers on Kumries in the Mudumalai range, the *Nilgiris*.

*Cultural operations—South Canara.*—In all ranges pit and broadcast sowings were carried out by subordinates with some success in the case of teak, *Hopea parviflora* and *Terminalia tomentosa*. *North Malabar.*—The group system of teak sowing in pits, prescribed in the Begur and Chedleth working plans, was carried out on a considerable scale. Forty-five per cent. of success is reported in Chedleth. In the fuel coupes of Kanoth 3,600 teak seedlings were planted. In *South Malabar* an attempt is to be made to underplant the teak with *Hopea parviflora*, rosewood, *Artocarpus hirsuta* and other species and a nursery was opened towards the end of the year. *North Coimbatore.*—Some basket planting of rosewood and vengai at Geddesal last year has turned out successfully. A good deal of dibbling of sandal and other species was attempted but is reported as only partially successful. In *South Coimbatore* attempts to fill up blanks in fuel coupes were again unsuccessful and will now be discontinued. In *Kollegal* about 500 acres were dibbled with sandal under bushes towards the end of the year. The results are not yet available. Four hundred lbs. of *Acacia arabica* seed was sown in Dodda Induvadi reserve and has germinated profusely.

(*c*) *Operations for the improvement of the growing stock.*

22. *South Canara.*—Light improvement fellings with creeper cutting were carried out in 4,700 acres at a cost of Rs. 724 and as a result it is reported that seedlings of valuable species are showing up most satisfactorily. In *North Malabar* creeper cutting and girdling were done in the felled areas of the previous year. *South Malabar.*—Five hundred and ninety acres of teak plantations in Nilambur range and 216 acres in Amarampalam range were thinned, accompanied by creeper cutting and weeding. In the *Nilgiris* marking for thinnings was made in three plantations. In *North Coimbatore* all the sandal coupes of the year were cleared of creepers and all useless species were girdled in the fuel coupes. In *Kollegal* soft woods were girdled in the Gundal and Araipalayam coupes. Nothing is reported from *South* and *Central Coimbatore.*

(*d*) *Experiments.*

23. *Rubber.*—At Tannir in *South Canara* is not doing well; nor in *South Malabar.*

*Swietenia Mahagoni.*—The experimental trees at Panayangote (*South Malabar*) are flourishing, also those in the office compound. Those planted as avenue trees in Karumpoya are keeping good condition.

*Swietenia macrophylla.*—These are doing well everywhere at Nilambur.

*Bamboos.*—Two-thousand seeded bamboos were cut and floated to Beypore in order to ascertain the cost of floatage of dry bamboo in connection with Mr. Nelson's bamboo pulp scheme. Six-thousand green bamboos were cut under three methods to test the former estimates of felling and dragging to river side and at the same time to ascertain the effect of different felling methods on regeneration, and separate registers have been opened for all works. The total cost to end of June was Rs. 2,134. The cost of floatage has far exceeded the estimate, probably for the reason that it was commenced too late in the year (January or February) and the journey appears to have taken several months.

*Eucalyptus.*—The 11 varieties planted in the Arboretum block, Cairnhill, the *Nilgiris*, show very slow growth.

## 5. Exploitation.

(*a*) *System of Management.*

24. The various sylvicultural systems in force over the areas for which working plans have been sanctioned are summarised below :—

| Sylvicultural system. | Area in square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| Method of clear fellings by compartments ... ... | 31 | 1·92 |
| Selection method ... ... .... ... ... ... | 346 | 21·38 |
| Simple coppice ... ... ... ... ... ... | 4 | ·25 |
| Coppice with standards ... ... ... ... ... | 338 | 20·89 |
| Method of improvement fellings ... ... ... ... | 202 | 12·48 |
| Forests for which working plans have been prepared but not subjected to any definite system of working ... | 697 | 43·08 |
| Total ... | 1,618 | 100 |

(i) Major Forest Produce.

(1) *Clear or regeneration fellings*—Nil.

25. Awaiting the first felling in the Nilambur teak plantations.

(2) *Selection fellings.*

26. *South Canara.*—Selection fellings were carried out over a portion of coupe VI of Madibare timber working circle and 160 mature trees in Someshwar coupe X were sold standing. *North Malabar.*—Three hundred and fourteen acres in coupe XVIII of Begur and 486 acres in coupe II of Chedleth were felled. *The Nilgiris.*—Sandalwood yielded 500 maunds in Sigur range. Owing to the appearance of "spike"

disease the selection fellings in the sandal working circles in *Kollegal* and *North Coimbatore* have been suspended. *Kollegal.*—Spiked and dead sandal trees were extracted from portions of coupe VI of Madeswaranmalai and coupes I, III and V of Bailur, from certain areas outside these two working circles and from coupes I to V of Gundal fuel working circle; the total number of trees extracted was 5,381. *North Coimbatore.*—Seven thousand one hundred and twenty-two spiked and dead sandalwood trees were removed over an area of 8,704 acres. *South Coimbatore.*—Coupe XXI of Tekadi leased forest (400 acres) and coupe VIII of Punachi working circle (71 acres) were felled.

(3) *Simple coppice.*

27. Thirty-eight acres of the Eucalyptus plantations in Ootacamund and Coonoor were coppiced for the supply of the public and the Wellington Cantonment.

(4) *Coppice with standards.*

28. In *South Canara* fifteen fuel coupes covering about 532 acres in Coondapur and Sankaranarayana and portions of two coupes in Puttur and Kasaragod were cut; as were 14 acres in Udipi for supplying sandalwood oil stills. *North Malabar.*—Twenty acres in Kanoth were felled for the fuel supply of the town of Tellicherry. In *North Coimbatore* 12 coupes—988 acres—were worked for fuel supply and 95 acres for drag poles and agricultural implements. In *South Coimbatore* 8 coupes of 335 acres, in *Central Coimbatore* 23 coupes of 1,631 acres, and in *Kollegal* portions of 4 coupes covering 223 acres were felled for the fuel supply of neighbouring towns and villages.

(5) *Improvement fellings.*

29. *South Canara.*—Coupe 3 of Nerankimale was worked for the fuel supply of Mangalore. In *South Malabar* the thinnings in the teak plantations yielded 12,181 trees and saplings. Five hundred acres in compartments 2 and 3 of block I, Mudumalai, in *the Nilgiris* yielded 44,241 cubic feet of teak and 4,496 cubic feet of other species as well as 172 teak poles. In *South Coimbatore* coupes VII and VIII of Punachi and coupe 1 of compartment II, Mount Stuart, were worked for improvement fellings.

(6) *Unregulated fellings.*

30. *South Canara.*—Firewood required for working 75 stills was removed from unreserved lands. Timber was also removed from unreserved lands on payment of seigniorage. In *South Malabar*, 362 dead and windblown trees were removed from Nellikutta and new Amarampalam forests on payment of a fixed value. In the *Nilgiris*, the demand for small timber, fuel, etc., was met as usual by issue of permits. In *North Coimbatore*, 25,137 cubic feet of timber and 13,919 cubic feet of fuel were removed on permits from unreserved lands.

(ii) MINOR FOREST PRODUCE.

(1) *Bamboos.*

31. Ten blocks in *North Coimbatore* covering 22,376 acres, eleven blocks of 3,413 acres in *Central Coimbatore* and two blocks as well as seeded bamboos in three blocks in *South Coimbatore* (areas not reported) were leased out. Removals on permits were allowed in *North Malabar*, the *Nilgiris* and *Kollegal* to meet local demands, from the natural forests of *South Malabar* for floating timber by purchasers and from unreserved lands in *South Canara.* Bamboos were also extracted departmentally from Kanoth forest in *North Malabar* for supply to Tellicherry town.

(2) *Miscellaneous Produce.*

32. Minor products of importance were generally leased out with the following exceptions:—*By Departmental Agency*—Manufacture of catechu in *South Canara*, collection in Mudumalai and Tunakadavu ranges in the *Nilgiris* and *South Coimbatore* respectively and all produce except tamarind, tanin barks, soapnuts, pungam seeds and date leaves from reserved forests in *North Coimbatore* and *Kollegal* divisions

(3) *Extraction of fodder grass.*

33. Fodder grass was removed on permits in *South Malabar* and *Coimbatore*. The concession of free removal of grass is not wanted in *Malabar* as the demand is met from private forests and unreserved lands. In other districts there was no necessity for it. The free removal of thatching grass from reserved forests in *South Canara* and by the Todas of the plateau and the Chetties of Mudumalai in the *Nilgiris* was continued.

34. (4) *Hay-making.*—Nil.

(5) *Grazing.*

35. Goat browsing is entirely prohibited. The forests of *South Malabar* are closed to grazing. Elsewhere grazing was, as usual, controlled by issue of permits. During the year, the block system of grazing by which permits are applicable to specified areas instead of to all forests was introduced in the *Nilgiris*. Free grazing on the Wenlock Downs was stopped as the damage caused by cattle lessened the value of the Downs as a recreation ground. The number of cattle licensed to graze on payment was 399,437 against 373,476 in the previous year.

(*b*) *Agency of Exploitation.*

(i) Departmental Agency.

36. *Major produce—South Canara.*—Felling in one timber; and for part of the year nine fuel coupes after which all fuel coupes were sold standing. Extraction of stumps of sandalwood trees stolen from unreserved lands; also some light improvement fellings. *North Malabar.*—Felling of 87,479 cubic feet of timber in Begur coupe XVIII and 16,400 cubic feet of fuel in Kanoth reserved forest. *South Malabar.*—Thinnings of teak poles and saplings in plantations. Spokes and felloes were manufactured from the top ends of teak saplings. *The Nilgiris.*—Improvement fellings in Mudumalai and extraction of sandalwood in Sigur range. Sandal fellings in *North Coimbatore* and *Kollegal*. *Central Coimbatore.*—The rectification of contractor's faults in some fuel coupes. *South Coimbatore.*—Selection fellings in Tekadi leased forest and improvement fellings in Punachi and Mount Stuart working circles and transport of timber from the leased forests to depots.

*Minor produce.*—The details are mentioned in paragraphs 31 and 32 *supra*.

37. *Disposal of produce at the edge of the forests.*—In *South Canara* fuel was sold on a small scale at Mulliar reserved forest and in some of the coupes; 35 chowks of fuel obtained from the improvement fellings in Pilarkan and about 732 cubic feet and 651 cubic feet of timber in Hulimeshepare and Parappa were sold at the edge of the forests. In *South Malabar*, there has been a great improvement in this respect. No less than Rs. 42,150 worth of thinnings were for the first time sold on plantation boundaries instead of being dragged and floated as hitherto to Beypore for sale. Some fuel felled departmentally in *Kollegal* and a few drag poles in *North Coimbatore* were sold in the forest In *South Coimbatore* the timber felled in Punachi coupe was disposed of in the same way.

(ii) By Purchasers.

38. One timber and all the fuel coupes in *South Canara*, the timber selection fellings in compartments II and III of Chedleth in *North Malabar*, Araipalayam fuel coupe VII in *Kollegal* and all the fuel coupes in *North*, *Central* and *South Coimbatore* were sold standing to contractors. In the *Nilgiris* 2,361 cubic feet of standing timber in reserved forests and 42 cubic feet of unclassified timber from the Mudumalai working circle were so removed. The felling and removal of about 400 windblown and uprooted trees in Nellikutta natural forest in *South Malabar* were given on contract. Also the unregulated fellings and the exploitation of bamboos and miscellaneous produce referred to in paragraphs 30, 31 and 32 *supra*.

(iii) & (iv) By Right-holders and under privileges and free grants.

39. The quantity and estimated value of produce removed by right-holders and free grantees are given in the following statement:—

| | Timber. | | Fuel. | | Bamboos. | | Grass and grazing. | Other minor produce. | Total. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic et. | Value. | Cubic feet. | Value. | Number. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | 36,175 | 14,470 | .. | .. | .. | .. | 780 | .. | 15,250 |
| Free grantees .. .. | 3,761 | 964 | 340 | 6 | 8,920 | 67 | 91 | 179 | 1,307 |
| Total .. | 39,936 | 15,434 | 340 | 6 | 8,920 | 67 | 871 | 179 | 16,557 |

The estimated value of produce and grazing enjoyed by right-holders and removed by free grantees was Rs. 15,250 and Rs. 1,307 respectively against Rs. 20,474 and Rs. 2,195 in the previous year. The Badagas in the *Nilgiris* continued to remove fuel on payment of a nominal fee of Re. 1 per annum per house. In *South Canara*, free grants amounting to Rs. 569 were made for churches, temples and other religious institutions and Rs. 160 to works of public utility. The grants made in other districts were chiefly for rebuilding houses destroyed by fire and produce was usually removed from unreserved lands.

*(c) Outturn and sources of forest produce.*

40. The outturn of produce collected by different agencies as compared with that of the previous year is given in the following abstract :—

| Agency of exploitation. | Timber including sandalwood in cubic feet. | | Fuel in cubic feet. | | Bamboos in number. | | Minor produce including grass and grazing in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| By Government Agency .. | 256,604 | 437,121 | 1,634,965 | 640,149 | 158,545 | 98,757 | 28,229 | 24,151 |
| By purchasers .. .. | 370,524 | 468,886 | 2,532,559 | 3,937,306 | 4,788,599 | 7,303,240 | 144,265 | 147,014 |
| By right holders .. .. | 49,077 | 36,175 | .. | .. | 1,210 | .. | 856 | 780 |
| By free-grantees .. .. | 8,390 | 3,761 | 3,415 | 340 | 13,405 | 8,920 | 470 | 270 |
| Total .. | 684,595 | 945,943 | 4,170,939 | 4,577,795 | 4,961,759 | 7,410,917 | 173,760 | 172,215 |

*By Departmental Agency—Major produce.*—The increase under "timber" was in *North Malabar*, the result of the exploitation of a larger area in the Begur working circle, in *South Malabar* to a larger yield from thinnings and windblown trees in teak plantations and in the *Nilgiris* to the fact that in the previous year the improvement fellings in Mudumalai working circle were stopped on account of the accumulation of stock. The extension of the contract system in *South Canara*, *Kollegal*, *North* and *Central Coimbatore* divisions, the felling of poorer areas in *South Coimbatore* and a somewhat decreased demand for firewood by the Military Department in the *Nilgiris* chiefly accounted for the decrease under 'fuel'. *Minor produce.*—"Bamboos"—The decrease was mainly in *South Canara* due to the sale of coupes standing to contractors. *Other produce.*—The total outturn decreased from 153 to 96 tons; the decrease was due chiefly to a poor crop of gallnuts, honey, etc., in *North Coimbatore* and to the stoppage of hay-making operations.

*By Purchasers—"Major produce."*—The increase under "timber" was due mainly to extensive sales of trees on darkhast lands chiefly in *South Canara* while that under "fuel", to replacement of departmental working by contractors. *Minor produce—"Bamboos"*—The increase was chiefly in *South Canara* and was due to the sale of coupes standing and to the working of larger areas in *North* and *Central Coimbatore*. *Other produce.*—There was an increase under "grazing collection" which is explained in Chapter III and a decrease under "other produce" which is distributed over all the districts and calls for no special remarks.

## CHAPTER III.—FINANCIAL RESULTS.

41. The financial results of the year compared with those of the previous year and with the average of the five preceding years are tabulated below :—

| | 1914–1915. | 1913–1914. | Average for the preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | * 9,12,063 | 8,41,735 | 7,77,773 |
| Expenditure— | | | |
| Refunds .. .. .. .. | 6,208 | †7,189 | 4,174 |
| A. Conservancy and Works .. | 5,59,205 | 4,18,683 | 4,46,290 |
| B. Establishments .. .. | 3,65,862 | 3,66,169 | 3,45,700 |
| Total expenditure .. | 9,31,275 | 7 92,041 | 7,96,164 |
| Net .. | — 19,212 | + 49,694 | — 18,391 |

* Excludes Rs. 25 relating to the Southern Circle.
† Excludes Rs. 3,588 relating to the Bombay Presidency.

The gross receipts were the highest on record for the Circle and exceeded those of the last year and the average of the preceding five years by 8·4 and 17·3 per cent. respectively. The net results also would have beaten any previous record but for an extraordinary charge of Rs. 1,74,849 incurred for the acquisition of Mudumalai and Kumbarakolli leased forests in the *Nilgiris* Sixty per cent. of the receipts was from major produce, 9 per cent. from grass and grazing, 12 per cent. from minor produce including bamboos and 19 per cent. from miscellaneous sources. Of the expenditure, 24 per cent. was spent on exploitation of the forests, 50 per cent. on their upkeep and improvement and 26 per cent. on miscellaneous items. The estimated value of timber and other produce in sale depots at the close of the year was Rs. 17,469 against Rs. 89,709 at its commencement. The revenue outstanding was Rs. 73,663 of which only Rs. 14,030 fell due within the year.

The important variations between the actuals of the year and those of the previous year are explained below :—

### Receipts.

#### (i) *By Departmental Agency.*

*Timber* + 49,875. The increase was in *North Malabar* due to larger fellings and in *South Malabar* to a larger outturn of plantation teak logs and to better prices obtained during the year; this increase was partly counterbalanced by a large decrease in *South Coimbatore* where transport of timber to the plains was brought to a stop since December 1914 owing to the road from Topslip having fallen in disrepair.

*Fuel* — 16,229. Due chiefly to extension of contract system.

*Bamboos* —3,800. Due to sale of bamboo coupes to contractors in *South Canara* to a smaller number of bamboos used for floating timber in *South Malabar* and to want of demand in *Kollegal*.

*Sandalwood* + 45,275. Due to extraction of sandalwood from unreserved lands in *South Canara* and to a larger outturn in *Kollegal* and *North Coimbatore*.

*Minor produce* + 2,136. The increase was due chiefly to sale of last year's stock in *Kollegal* and *North Coimbatore* and to better prices obtained for gallnuts in the former district.

#### (ii) *By Purchasers.*

*Timber* + 2,308. Due chiefly to increased revenue by sale of trees on darkhast lands.

*Fuel* + 4,891. Due to increased receipts from unreserved lands in *South Canara* and to better prices obtained for fuel coupes in *North* and *Central Coimbatore*.

*Bamboos* —7,964. Due to non-realization of lease amounts in *North Coimbatore* before the close of the year.

*Grazing* + 3,722. Due to introduction of the block system in the *Nilgiris*, to a larger number of foreign cattle licensed in *Kollegal* and to increased demand for fodder grass in *North Coimbatore*.

*Minor produce* —3,322. Due chiefly to poor crop.

(iii) *Miscellaneous (including confiscated drift and waifwood).*

—6,564. Due chiefly to abnormal receipts during 1913-14 in *South Canara* as a result of the campaign against systematic sandalwood thefts.

EXPENDITURE.

The increase of Rs. 1,40,522 under '*A. Conservancy and Works*' was due chiefly to the reason mentioned in the beginning of this Chapter. There was a small decrease of Rs. 307 under '*B. Establishments*' which calls for no special remarks.

## CHAPTER IV.—ADMINISTRATION.

42. The charge of the Circle was held by Mr. C. D. McCarthy throughout the year.

*District and Range charges.*—There were no alterations during the year.

*Establishment.*—The inadequacy of trained rangers continues to be keenly felt. At present no less than eight range charges out of a total of 31 are in the hands of untrained deputy rangers. This state of things is not confined to this Circle and it was unanimously decided at the last Conference of Conservators to recommend an increase of the present proportion of Government students to be deputed for training to the Forest College.

43. *Work of superior officers.*—Extracts of Collectors' remarks are appended—*South Canara*—By Mr. A. J. Curgenven—" M.R.Ry. V. Raman Menon and Mr. Hart have discharged thei duties satisfactorily." *Malabar—By Mr. Innes—North*—"Mr. Littlewood worked hard and camped well, and such reports as I have received from him have showed care, industry and intelligence." *South*—" Mr. Bourne's work maintained its usual high standard. I have been much impressed in all reports I get from him with the thoroughness with which they have been prepared. *The Nilgiris—By Mr. Young*—"The work of both officers (Messrs. S. Cox and R. D. Richmond) was all that could be desired. Mr. Habibulla Sahib did his work conscientiously and on the whole well. His health was however not always good." *Coimbatore—By Mr. A. R. Cumming—Kollegal*—" M.R.Ry. P. Venkataramanan has worked with keenness and industry but his relations with the local Revenue officials have not been harmonious and his touring has not been as thorough as it should have been." *North*—" Mr. Wood's work throughout the year was characterized by marked efficiency and thoroughness. His intimate personal knowledge of the conditions of the forests in his division has been of the greatest value to me. Mr. Woodhouse Adolphus has still to prove his qualifications for the post he holds." *Central.* "The work of the superior staff was satisfactory." The officers in the division were M.R.Ry. Chengappa and Mr. Hodgson for a few days and Mr. Habibulla Sahib. *South.* "Mr. Fischer has worked zealously and well. Mr. J. H. Longrigg was posted to the charge of the Tunakadavu range in January 1915 and has taken a keen interest of the work in the range. Mr. Robinson has shown himself diligent and eager to learn."

44. *Executive establishment.*—The work of rangers is generaly well reported on. L. S. Janes, E. B. Ramachandra Rao, A. R. Narasimha Ayyangar and A. Nicholas are singled out for special mention. One ranger was suspended and is to be prosecuted criminally in connection with theft of timber, one was reduced temporarily for bad work and one of the directly appointed probationary rangers was reduced to deputy ranger and subsequently resigned. The work of deputy rangers was fairly satisfactory. One deputy ranger was dismissed and the probation of three was terminated.

45. *Protective staff.*—The conduct of foresters with a few exceptions was not satisfactory. No improvement among the lower ranks of foresters and guards is reported. *Punishments*—One forester was dismissed, the services of one were dispensed with, six foresters were reduced and two suspended. *Guards*—Dismissals 8, removals from service 22, suspensions 29 and reductions 7.

46. *Ministerial establishment.*—The post of temporary draftsman in the Circle office and in the Divisional offices of *North* and *South Coimbatore*, *North Malabar* and *South Canara* was made permanent. The establishment is reported to have

worked on the whole satisfactorily. The head clerks of *South Malabar*, *the Nilgiris*, *North*, *Central* and *South Coimbatore* are specially mentioned for good work. *Punishments —Divisional offices.*—One clerk and the draftsman in *South Coimbatore* were reduced temporarily. *Range offices*:—One clerk in *South Malabar* was dismissed, the services of one in *Central Coimbatore* and three in *South Coimbatore* were dispensed with; one in *Kollegal* and two in *Central Coimbatore* were suspended. The range establishment is reported to be wanting inefficiency. The manager and staff in the Conservator's office worked with zeal and efficiency.

47. *Health of the establishment and casualties.*—The health of the establishment was on the whole good in *North Coimbatore*, fair in *South Canara* except at foot of the ghats, fairly satisfactory in *Kollegal* and bad as usual elsewhere except on the *Nilgiri* plateau. *Deaths*—One in each of the *Nilgiris*, *Kollegal*, *North* and *South Coimbatore*. A large number of subordinates have had to be granted leave on medical certificate. At the end of the year five rangers were absent from duty on this account.

48. *Relations between Revenue and Forest officers.*—The relations continued to be cordial with the exception of the instance in *Kollegal* referrred to in paragraph 43 *supra*. The District Forest Officer, *South Coimbatore*, and all Range officers in *South Canara*, one Range officer in *Central* and *South Coimbatore* attended the jamabandi. Such attendance is not required in *Malabar*; in the *Nilgiris* the officers are reported to have been in constant touch with each other. No complaints of importance were brought to the notice of the jamabandi officers.

49. *Service books.*—Maintained and verified up to the close of the financial year except in the *Nilgiris* where they were verified to the close of the calendar year.

50. *Tours of the Forest Member.*—The Hon'ble Mr. R. C. C. Carr inspected the plantations in *South Malabar*.

51. *Conservator's inspection.*—All the District Forest offices were inspected with generally satisfactory results except as regards *Kollegal* and *Central Coimbatore*. The disorder in the former was however due to the gross inefficiency of two Range officers. The forests of *North* and *South Malabar*, *the Nilgiris*, *Kollegal* and *South Coimbatore* were also inspected. The total number of days spent in camp was 187.

52. *Touring of District Forest officers.*—With the exception of the District Forest officers, *South Malabar*, *the Nilgiris*, *Kollegal* and *Central Coimbatore* the others spent in camp more than the minimum period of touring prescribed. The short touring in *South Malabar* is ascribed to the fact that the greater part of the area under working was within the five-mile radius, in the *Nilgiris* to Mr. Cox having disposed of his camp kit in anticipation of his taking furlough and to his stay at Head-quarters for a month on account of an operation to his hand. The apparent deficiency in *Central Coimbatore* and *Kollegal* was due to the charge of these divisions being held by neighbouring District Forest officers for 8 and 5 months respectively.

53. *Inspection of Range offices.*—All Range offices except one in each of *North* and *South Malabar* and the *Nilgiris* were inspected and found generally in good order with five exceptions. With the exception of the sale depots at Beypore in *South Malabar* and at Kargudi in the *Nilgiris*, all were inspected. The Kargudi depot was not inspected for want of time and the stock at Beypore was found to be correct at the time of sale so that no inspection was necessary. One depot keeper in *South Coimbatore* was suspended and the services of another were dispensed with.

54. *Audit of accounts of District Forest offices.*—The accounts of all the offices except *South Canara*, *Central* and *South Coimbatore* were audited by the Local Fund Audit establishment. The Assistant Accountant-General inspected the accounts of the *Nilgiris* and *Central Coimbatore*. The results are reported to be satisfactory.

55. *The Madras Forest College, Coimbatore.*—Four deputy rangers passed the College with the higher standard certificates, one of whom was awarded a prize for field engineering. Three rangers, one directly appointed probationary ranger and one deputy ranger were deputed for training for the 1914–16 course.

56. *Imperial Forest Research Institute and College.*—One probationer for the Provincial Service was under preliminary training ir *South Canara* and deputed to the College.

57. *The Vernacular Training School.*—The year's session was held in *Central Coimbatore.* Students from the *Nilgiris*, *Kollegal* and *South Coimbatore* also were deputed for training. The strength of the school at the start was 29 of whom one deserted subsequently. The course was not completed until after the close of the year.

## CHAPTER V.—GENERAL.

58. *Realization of revenue from the usufruct of toddy-yielding trees, etc.*—Revenue from this source was realized only in *South Canara* and *Kollegal*—Rs. 1,531 and Rs. 22 respectively, against Rs. 2,152 and Rs. 30 in the previous year.

59. *Measures adopted to encourage the growth of manure-leaf-yielding trees and shrubs.*—No action was found necessary in this direction as the demand was met in some districts from private forests and patta and unreserved lands and in others such measures were not required.

60. *Supply of forest produce to meet the wants of the people—South Canara.*—The concession of free removal of thatching grass, used also at times as fodder, and of grass and leaves from a portion of the Baindur reserved forest was continued. No abuse of this concession was brought to notice. Timber and fuel were retailed in certain depots. *Malabar.*—Owing to ample supplies in private and unreserved lands there is practically no demand upon the reserves. *The Nilgiris.*—The removal of small timber, fuel, bamboos and other produce on permits was as usual allowed. The Badagas continued to enjoy the concession of obtaining their annual supply of fuel on a nominal payment of Re. 1 per house, and the public of Coonoor and Ootacamund were supplied with firewood from the plantations. Firewood and charcoal were also sold in retail in depots. *Kollegal.*—The supply to the public of small timber, agricultural implements and bamboos through the agency of monigars and permit-issuing officers was continued; but the issues were small as the people are able to get almost all their requirements from unreserved and patta lands. There is no demand for fuel from the reserves except for the supply of Kollegal town. *North Coimbatore.*—The supply of fuel and bamboos was made through the agency of contractors The demand for small timber and agricultural implements was met by retail sales and periodical auctions at forest depots. But very little business was done owing to the supplies available in unreserved lands. The supply of forest produce in *Central* and *South Coimbatore* was met from contractors' coupes of which there are large numbers. The removal of brushwood in head loads from coupes under working was continued in all the *Coimbatores.*

### *Forest Committee's Report.*

61 (*a*) *Classification of forests.*—The classification of reserved forests in the circle was completed. Four small reserves in *South Canara* and *Kollegal* were disafforested during the year.

(*b*) *Management by village panchayats.*—There is a very small area of class V forests in this circle. Except for one in *Kollegal* and two in *South Canara*, they are all small isolated blocks in the Erode and Dhārāpuram taluks. Out of 9 in *Central* and 7 in *South Coimbatore*, 7 and 5 respectively have been handed over to panchayats. The amount of revenue assessed on these forests is given below :—

| | Name of reserve. | Area in acres. | Amount of grazing revenue fixed. |
|---|---|---|---|
| | | | Rs. |
| *Central Coimbatore* | Ellapalayam | 196·08 | 56 |
| | Sullipalayam | 445·70 | 160 |
| | Sinnaveerasangali | 934·18 | 260 |
| | Virumandampalayam | 707·14 | 192 |
| | Arachalur (plains) | 1,686 29 | 372 |
| | Tambikalayam | 273·69 | 21 |
| | Pandiyampalayam (portion) | 180·00 | 13 |
| *South Coimbatore* | Ganapati | 414·31 | 150 |
| | Talavoipatnam | 323·57 | |
| | Sennakalpalayam I bit | 103·53 | |
| | Do. II bit | 101·06 | |
| | Utiyur | 932·07 | 35 |

In *Central and South Coimbatore* the panchayats were found to be admitting a much larger number of cattle than the possibility. In *South Coimbatore* the management is otherwise pronounced to be satisfactory in the case of the first four areas. One or two panchayats are reported to have started works of improvement, such as clearing prickly-pear, repairing wells and fencing. Utiyur forest was handed over to a panchayat during the latter part of the year. A feature of panchayat management is the immediate raising of the grazing fee. The old Government fee of 3 annas has been raised in some cases to Re. 1 and even Rs. 1-8-0 per head Chembugudde reserved forest and two small pieces of unreserved lands near Udipi and Karkal in *South Canara* were also managed by panchayat. The working of the panchayat has not been reported on.

(*c*) *Opening of small coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—There is no demand for such coupes in this circle as coupes sold to contractors, private forests and unreserved lands meet the requirements. A trial coupe was opened in *North Coimbatore* and the fuel felled remained unsold and had to be written off. Another coupe was advertised but there were no offers.

(*d*) *Measures adopted for improving the water-supply in Government grazing grounds and the facilities for grazing and pasturage.*—In *Kollegal* one well in the Chikkailur reserved forest and another in Madeswaranmalai were repaired by the graziers and subordinates free of cost. In *North Coimbatore* the tank at Kakkarai in the Gutialattur reserved forest was repaired at a cost of Rs. 880. In *South Coimbatore*, no advance was made in this direction owing to changes among subordinates. No steps are necessary in *South Canara*, *Malabar* and *the Nilgiris*.

(*e*) *System of patrol by a gang of subordinates* —The system is believed to have been introduced in *South Canara*, certain parts of the *Nilgiris* and in *Central* and *South Coimbatore*. But no reports have been received except from *South Coimbatore* which states that the staff is too small to make the system effective. I have, however, discussed the subject with several District Forest officers and agree in the opinion expressed by them, viz., that, with the present paucity of the class which should hold control of the patrol section (Deputy Rangers and Foresters), it is impossible to constitute the sections without either leaving a considerable portion of the forests without inspection, or making them so large that inspection at one end would leave the rest of the section unprotected for too long a period.

62. *Grant of cowles for the formation of casuarina plantations in sandy areas.*—Nil.

*Rules under the Forest Act.*

63. (*a*) *Timber transit rules.*—The rules are reported to have worked satisfactorily in *South Canara*, *North Malabar* and the four divisions of *Coimbatore*. In *South Malabar* the registration of property marks alone was in force.

(*b*) *Rules under section* 26 *of the Forest Act.*—The rules worked satisfactorily and the privileges conferred by them were availed of by the public. There was no change in the area of unreserved lands under the control of the department.

(*c*) *Other rules.*—Sandalwood transit rules referred to in the previous report were sanctioned and brought into force in *South Canara*. In the *Nilgiris* the shooting rules remained unaltered and the fishing rules were re-notified for one more year with slight modifications regarding trout and masheer fishing.

64. *Hill tribes.*—The co-operation of the hill tribes in the matter of providing labour for departmental works, collecting miscellaneous products and planting blank areas has progressed. They were granted leases of lands free or on nominal rent in all districts except *South Malabar* where a proposal to lease out 32 acres in unreserved lands to some mulcer watchers was under consideration. Eighty-two acres were leased out to Kudubies and Mahratties in *South Canara* for Kumri cultivation, six acres in *North Malabar* to Kurichiyars for ponam cultivation, 1,229 acres free of rent to Sholagars in *North Coimbatore* and 795 acres to the Irulars in *Central Coimbatore*. There were no fresh leases to the Sholagars in *Kollegal*. The existing free leases to hill men in *South Coimbatore* were continued. These hill men were also employed on fire-protection work on the system of grant of rewards on results. In the *Nilgiri*-

Kurumbers in Mudumalai and Benne forests were employed as elephant attendants and on fire protection. It is hoped to settle more Kurumbers in the *North Malabar* and Mudumalai forests.

65. *Cultivation in reserved forests.*—Tenant-at-will leases covering 21 acres were continued in *South Canara* on an annual rent of Rs. 24. In *North Malabar* 210 and 478 acres for ponam and wet cultivations respectively at an annual rent of Rs. 2-8-0 per acre were leased out. In *South Malabar* the lease of 4 acres in the old Amarampalam reserved forest for paddy cultivation was renewed for one year on an annual rent of Rs. 10. Another lease of 120 acres in the new Amarampalam reserved forest which was renewed last year for two years is still in force. In the *Nilgiris* the Irulars on the eastern and southern slopes were allowed to cultivate lands in ten places covering 151 acres. It is to be feared that there have been several unauthorised clearings and the condition that these men should provide labour for the department has not been enforced. The leases in *Kollegal* and *North Coimbatore* for cultivation on payment of rent continued. Fresh leases for cultivation on the Anamalais in *South Coimbatore* were granted to planters during the year. The location of residential settlement on the Anamalais in the midst of the planting area was sanctioned and about 20 acres of forests were cleared of growth for the purpose.

*Live and dead stock.*

66. (*a*) *Elephants.*—Twenty-four elephants were captured during the year and there were two births; seventeen were sold for Rs. 37,000, one was killed by a wild tusker, three died and one was transferred to Upper Gōdāvari; the number remaining at the close of the year was 119. Of the deaths one was a new capture, another was old and the third was suffering from diarrhœa due to irritation caused by bots. The condition of the other animals was good.

(*b*) *Bullocks and buffaloes.*—Eighteen bullocks were purchased during the year. The casualties of the year comprised six deaths (four on account of old age, one due to snake-bite and one killed by a tiger), five sold as unfit for forest work and twelve condemned and destroyed. The number of bullocks that remained at the close of the year was 64. Of the 51 buffaloes that remained at the commencement of the year, six died from anthrax, six from other disease and one was sold leaving a balance of 38.

(*c*) *Veterinary establishment.*—Mr. F. X. Mascarenhas, Special Veterinary Inspector, inspected the live-stock in the different districts and attended to their ailments. There was a sudden outbreak of anthrax at Nilambur in an area where elephants and buffaloes were at work. It was due to the prompt and capable action of the Special Veterinary Inspector that there was no loss in the elephant stud. The Assistant Veterinary Inspector M.R.Ry. S. N. Tammayya who was in charge of the live-stock in *South Coimbatore* is reported to be a capable and zealous officer and to have proved himself of great service.

(*d*) *Inventory of valuable stock.*—Stock registers are reported to have been maintained and verified at inspections. The value of the live-stock and stores at the close of the year was Rs. 3,27,757 and Rs. 3,63,503, respectively.

67. *Rain-gauges.*—The rain-gauges were maintained and readings recorded in all districts. There was no improvement in recording the readings in *South Canara.*

68. *The Gass Forest Museum and the garden.*—The control of the museum was transferred to the Principal of the Madras Forest College in January 1915 and the exhibits were accordingly removed to the new building. The garden in the compound of the Conservator's office was maintained as usual and Rs. 160 were realized by sale of flowers, fruits and plants.

69. *Suits.*—The appeal preferred by the lessee of private forests in the Attapadi valley in *Central Coimbatore* in connection with a claim to a right of way over the Mangarai-Anaikatti path through the Tadagam reserved forest was dismissed. There were no other suits of importance.

COIMBATORE,
*29th September* 1915.

C. D. McCARTHY,
*Conservator of Forests,*
*Western Circle.*

# ADMINISTRATION REPORT OF THE MADRAS FOREST COLLEGE, COIMBATORE, FOR THE YEAR ENDING 30TH JUNE 1915.

## CHAPTER I.

1. The office of Principal was held by Mr. F. L. C. Cowley-Brown, Deputy Conservator of Forests, throughout the year.

2. The appointment of instructors were held by the following officers during the year :—

(1) C. B. Dawson, Esq., Deputy Conservator of Forests, throughout the year.

(2) H. C. Bennett, Esq., Deputy Conservator of Forests, from 4th December 1914.

(3) M. R. Ry. K. R. Venkataramana Ayyar Avargal, Extra Assistant Conservator of Forests, throughout the year.

(4) J. A. Aranha, Esq., Extra Assistant Conservator of Forests, from 27th July 1914.

(5) M. R. Ry. C. Srinivasa Rao Avargal, B.A., up to 4th December 1914 when he reverted to the post of Curator, Gass Museum, and Science Lecturer to the College.

The posts of Sub-Assistant Surgeon attached to the College were held by Mr. T. S. Pichu Ayyar from 5th November 1913, to throughout the year under report and by A. R. Shanmuganathan from 1st July 1914 to 17th September 1914 when he proceeded for military service. From 17th September 1914 onwards one division of the College had no medical officer.

3. In January 1915 the Gass Forest Museum was transferred to the charge of the Principal from that of the Conservator of Forests, Western Circle. The former Curator Muhammad Aziz-ud-din was appointed Special duty Officer in the Gass Museum for the purpose of assisting in the transfer, etc., of the museum to the new site.

4. The Hon'ble Mr. R. C. C. Carr vacated on 15th January 1915 the Presidentship of the Board of Visitors and was succeeded by the Hon'ble Mr. H. F. W. Gillman.

Mr. P. M. Lushington, Conservator of Forests, filled the vacancy on the Board of Visitors caused by the retirement of Mr. J. S. Battie on 3rd November 1914 and Mr. S. Cox joined the Board on 26th January 1915 as Acting Conservator, *vice* Mr. H. B. Bryant on leave.

5. The Board of Visitors met at Coimbatore in June when the final examinations were held and the College prizes and certificates were awarded. The number of senior division students at the end of the course was 29.

The following list in order of merit shows the certificates awarded :—

| Honors. | Circle or State to which attached. |
|---|---|
| 1. T. G. Sankaran Nayar ... ... ... ... ... | Southern Circle. |
| 2. R. Srikanta Pillai... ... ... ... ... ... | Travancore. |
| 3. P. Velayudan Nayar ... ... ... ... ... ... | Do. |
| 4. T. N. Kochunni Tirumalpad ... ... ... ... | Private student. |
| *Higher standard.* | |
| 5. A. K. Kandan ... ... ... ... ... ... | Southern Circle. |
| 6. M. Ambu ... ... ... ... ... ... ... | Western ,, |
| 7. B. Punnayya ... ... ... ... ... ... | Northern ,, |
| 8. K. C. Joseph ... ... ... ... ... ... | Private student. |
| 9. B. P. Tammayya ... ... ... ... ... ... | Coorg. |
| 10. J. A. P. D'Cruz ... ... ... ... ... ... | Northern Circle. |
| 11. C. S. Viraraghava Ayyar ... ... ... ... | Travancore. |
| 12. Y. S. Chennigaraya ... ... ... ... ... | Private. |
| 13. P. Miranda ... ... ... ... ... ... | Western Circle. |

| Honors. | Circle or State to which attached. |
|---|---|
| 14. A. Sidda Pillai ... ... ... ... ... ... | Central Circle. |
| 15. S. Ramanujam Sesha ... ... ... ... ... | Southern ,, |
| 16. K. S. Ramiah ... ... ... ... ... ... | Private |
| 17. R. Alagiriswami Nayudu ... ... ... ... | Central Circle. |
| 18. E. W. Fernandez... ... ... ... ... ... | ,, |
| 19. I. John ... ... ... ... ... ... ... | Private |
| 20. N. Vijiarangam ... ... ... ... ... ... | Northern Circle. |
| 21. B. S. Ramaswami Ayyar ... .. ... ... | Western ,, |
| 22. M. Muhammad Sheriff ... ... ... ... ... | Mysore. |
| 23. B. C. Varadarajan ... ... ... ... ... | Do. |
| 24. S. Jothinayagam ... ... ... ... ... ... | Northern Circle. |
| 25. H. Myers ... ... ... ... ... ... ... | Western ,, |
| 26. K. Kunjukuttan Raja ... ... ... ... ... | Travancore. |
| 27. T. V. Ommen ... ... ... ... ... ... | Private. |
| 28. R. Govinda Pillai... ... ... ... ... ... | Do. |
| *Lower standard.* | |
| 29. T. Subba Rao ... ... ... ... ... ... | Mysore. |

The Government and other prizes were awarded as follows :—

| Name of medal. | Name of student. |
|---|---|
| Best second year student (gold medal) ... ... ... | T. G. Sankaran Nayar. |
| Do. in Forestry ... ... ... ... | Do. |
| Do. in Engineering ... ... ... | Do |
| Do. in Botany ... ... ... ... | Do. |
| Campbell Walker prize for the best all round Ranger ... | Do. |
| Indian Forester prize for an essay ... ... ... ... | Do. |
| Principal's prize for Sylviculture ... ... ... ... | Do. |
| Survey prize awarded by the President, Board of Visitors. | T. N. Kochunni Tirumalpad. |
| Lodge prize for Engineering ... ... ... ... | M. Ambu. |
| Brasier Memorial prize for the best out-door Ranger ... | J. A. P. D'Cruz. |
| Coonoor Project Plate prize awarded by Mr. R. D. Richmond. | R. Srikanta Pillai. |

6. The students of the 1913–15 division were examined by the District Medical and Sanitary officer of Coimbatore, in first aid. Twenty-five students were successful in gaining the St. John Ambulance Association certificate.

## Chapter II.

For the year under report 34 students were nominated to join the College on 1st August 1914 for the 1914–16 course: namely 22 Government students, two State students from Mysore, four State students from Travancore, 1 from Cochin and 5 non-stipendiary private students. Two students failed to join, and one student within the first week was removed as he was unwilling to continue the course. In his place a Government student was selected from the Central Circle.

The list of students admitted is attached. Out of these 32 students two were withdrawn from the College for incapacity leaving 30 in residence for the second year course.

7. The final examinations in Mathematics and Physical Science for the 1914–16 division were held in June 1915.

Medals for the best junior student in Forestry, for the best junior student in Survey, for the best junior student were presented by the members of the Board of Visitors. They were all won by C. M. Kunhiraman Nayar.

## Chapter III.

8. The year under review has been one of steady progress for the most part unmarked by incidents of grave importance.

9. The new College was not completed by the close of the year, and consequently the move to the new site was once more postponed. The new Gass Museum was handed over to the Principal on 18th February 1915, the transfer of show cases being effected by Messrs. Srinivasa Rao and Aziz-ud-din. The task of arranging and furnishing up the exhibits has proved far more lengthy than was anticipated, but it is now approaching completion.

The lack of adequate protection from the sun and rain, due to the peculiar type of architecture adopted, will, it is feared, seriously affect the welfare of the more delicate specimens.

10. The even tenour of the College routine was necessarily interrupted by the mobilization of the five volunteer students to perform garrison duty at Wellington and Karteri. These students were for two or three months absent from the cold weather tour, but under the orders of Government were given special averages. Student J. A. P. D'Cruz (Sergeant) was highly commended by his Commanding Officer and Adjutant for his work and influence in the corps. Over Rs. 1,300 was subscribed by the College to the War Relief Fund.

11. The 1913–15 division contained some very good men and one student of exceptional ability—the average of the 1914–16 division is somewhat lower.

The examiners reported that the senior division was well grounded and at the same time recorded some valuable suggestion for the course of instruction and training.

12. The age of the Government students, referred to in last year's administration report, is similarly in the 1914–16 and 1915–17 Divisions, higher than is consistent with the assimilation of the full benefits of the College training.

The average and the maximum ages of these Government students is as follows:—

| 1914–16 Government students. Average 28–5. | | 1915–17 Government students. Average 27–4. | |
|---|---|---|---|
| Students over 30 years ... ... | 7 | Students over 30 years ... ... | 5 |
| Do. ,, 31 ,, ... ... | 5 | Do. ,, 31 ,, ... ... | 4 |
| Do. ,, 32 ,, ... ... | 3 | Do. ,, 32 ,, ... ... | 3 |
| Do. ,, 33 ,, ... ... | 3 | Do. ,, 33 ,, ... ... | 2 |
| Do. ,, 34 ,, ... ... | 3 | Do. ,, 34 ,, ... ... | 2 |
| Do. ,, 35 ,, ... ... | 2 | Do. ,, 35 ,, | |
| Do. ,, 36 ,, ... ... | 2 | | |
| Do. ,, 37 ,, ... ... | 2 | | |
| Do. ,, 38 ,, ... ... | 1 | | |

13. The 1914–16 division consists at present of 20 Government students. The conduct report register of one has not been received. Of the remainder the conduct report of one is very good, of eight good, of four fair and of six moderate.

Of the 22 Government students of 1915–17 division conduct report registers have not been received in the case of two students: of the remainder the conduct report of one is very good, of five good, of eight fair, of four moderate and of two bad.

14. The conduct of the students on the whole has been quite satisfactory. No serious breaches of discipline has occurred, and the House Committee is gradually realizing its responsibilities. It is under contemplation to accord the House Committee certain special privileges.

15. The weight of the students at the end of the year showed an increase over that recorded 12 months previously. The improvement in physique, bearing, and general smartness was most marked. All students requiring it were vaccinated at the beginning of the rains term. The health of the College throughout the year has been generally satisfactory.

16. The Standing Orders were consolidated and printed to form a code of the internal regulations of the College. The rules of the Athletic Club, the detailed allocation of marks subject war to each examination and tour, a memorandum on camp administration and the history of the College and Gass Museum (the latter compiled by Mr. Srinivasa Rao) were also printed. A draft calendar was prepared for the Press.

17. The Hon'ble Mr. A. G. Cardew and the Hon'ble Mr. R. C. C. Carr visited the students at field work in headquarters, and the Hon'ble Mr. H. F. W. Gillman inspected the camp and road construction operations at Ootacamund.

18. In October 1914, the Principal selected non-stipendiary private students for the 1915–17 course. One applicant for a private studentship who sent up a Secondary School-Leaving Certificate containing false entries, was declared permanently debarred from entering the College.

19. The cold weather tour commenced on November 1st and ended on February 28th. The junior students were taken for a preliminary tour of 10 days in August and September in the Bolampatti valley under the Principal and Mr. J. A. Aranha. The hill tour occupied the months of April and May. The touring arrangements were this year placed directly under the officers in charge of divisional camps: Mr. Dawson being in charge of the junior division camp for the whole touring season, and Mr. Venkataramana Ayyar in charge of the senior division camp until December 4th when he relinquished his duties as camp officer to Mr. Bennett. After Christmas Mr. Srinivasa Rao, in accordance with the orders of the Board, did not accompany the College on tour as Botany Instructor.

20. *Cold weather tour*: 1914–15.—The senior division visited Walayar (Central Coimbatore) Chittoor Kodivengamabhavi, and Kodur (Cuddapah district), Mamanduru (Chittoor), Bolampatti (Central Coimbatore), Yercaud, Noganur and Jowlagiri (Salem, North).

The junior division camped at Nilambur and Nedungayam (South Malabar), Mount Stuart (South Coimbatore), Bolampatti (Central Coimbatore), Trichinopoly and Mundanthurai (Tinnevelly division). The operations carried out did not differ greatly from those executed in previous years. A fine Irish bridge was constructed at Kodivengamabhavi and useful river training was undertaken at Bolampatti. The sylvicultural work included sample plots, and marking for thinnings and retention of standards.

The Bolampatti camp consisted of both divisions and as previously benefit was derived from both divisions being together. The final survey examination of the senior division was held here, each student being given three coolies and an independent area to survey. The junior division made an enjoyable and instructive excursion to Muthikulam.

The visit of the senior division to Yercaud was less profitable than had been anticipated, and might be dispensed with in future years. At Noganur this division (divided into parties) made a working plan. The junior division derived distinct profit from the tour to the Padugais near Trichinopoly, where St. Joseph's College Industrial School was also visited with advantage. At Calicut they paid an instructive visit to the oil and saw mills. During the whole of their tour special stress was laid on the relations of soil to tree growth.

21. *Hill tour.*—The senior division were in camp at Bandyshola about five miles above Coonoor in tents, and the junior division at Ootacamund in the Fernhill lines occupied during the previous two hill tours. The work of both divisions may be gauged by the following extract from a note prepared for the Board of Visitors:—
"The special work of the College during the hill tour this year has been (in addition to the general study of the sylvicultural problems presented by the varying types of forests visited).

*Senior division.*—Kargudi: Thinnings of degraded forests for the District Forest Officer. Study of improvement fellings, road system and fire protection. Elephant lectures by the Veterinary Assistant and practical work in harnessing and management of elephants including Kraals and nursery. Timber dragging and elephant capturing were also studied.

*Bandyshola (five miles above Coonoor).*—The alignment of four roads (aggregating four miles five furlongs) for the exploitation of Teneriffe, Bleak House, Coonoor Peak, Old Forest and Spring Field. This is the most important engineering work the College has ever undertaken and will enormously appreciate the value of these forests. It was previously anticipated that the services of the Forest Engineer would be required for the project, but the division has proved itself equal to this ambitious task.

*Other engineering works undertaken.*—(1) Preparation of contour maps of Coonoor Peak R. F. including survey of all existing and proposed roads and bridle paths. (2) Preparation of separate plan of roads connected with the land acquisition. (3) Collection of data and preparation of proposition statement for the acquisition of the land involved. (4) Preparation of detailed reports, estimate and specification with longitudinal and cross-sections drawn to scale for all new roads aligned. (5) Study of ground for construction of fuel slides in Coonoor Peak R. F. (6)

Preparation of final reports, with full working details and estimate of the new roads for District Forest Officer, Nilgiris. (7) Construction of particularly difficult piece of road along one of the proposed alignments (for demonstration purposes) and also in order to collect data for the rates proposed in the estimate.

The following plantations were marked for thinnings:—Newman, Eucalyptus 549 trees marked. Coonoor Peak: Frenella, Cupressus and Pinus: 10·7 acres of 1,671 trees marked. Sim's Park: small plantations of Syncarpia and Buchlandia marked.

*Junior division.*—Checking and rectification of the boundaries of Arambi and Cairn Hill. One compartment in Muthinad marked for thinning. Charcoal operations in Muthinad. Alignment and complete construction of a bridle path (about one mile) in Cairn Hill. Thinning of Pinus Longif Pinus Marit and Frenela. Wounding the soil for the purpose of provoking the regeneration.

Study of the problem of timber production of nine new Eucalyptus species in three plantations at 6,000′, 7,000′ and 8,000′. Volume measurement by calculated form factor for Frenela and Cupmacracarpa sample plots. Measurement of sample plots in Muthinad reserve. Study of Eucalyptus Oil distillation.

In future years apart from general sylvicultural studies, there is ample scope for work in carrying out the prescriptions of Mr. Cox's working plan, *e.g.*, the checking and correction of boundaries, of enclosures, the survey alignment and cutting of compartment and block lines, thinnings and improvement fellings, charcoal making, construction of roads and especially of slides, etc.

Botanically the students' knowledge and horizon are greatly enlarged by the opportunity of studying the exotics and shola trees *in situ* and in Sim's Park and the Government Gardens.

The physical benefit of the hill tour scarcely needs demonstration. The students lead the ideal Forester's life—they have very few lectures and are out in the field from 7-30 A.M. till 4 P.M. or later in the finest of climates. At Coimbatore they undoubtedly have to undergo a prolonged intellectual strain, and the change in their bearing and alertness by the end of the hill tour is most noticeable."

22. The summer term (June 15) was occupied with a brief refresher course and by the final examinations. Sanction was obtained for the employment of outside examiners in the major subjects. The Board of Visitors which met on June 27th 28th, 29th and July 1st discussed some forty subjects including the draft calendar. The following are amongst the most important resolutions arrived at:—Nilgiri tour to be reduced to one month annually for each division. Yercaud, Javadis, Cuddapah and Chittoor tours to be abolished: Mathematics to be removed from the syllabus, and science to be reduced: Principal to be given an annual allotment for the maintenance of the college estate: one periodical examination abolished: marks reallotted giving 500 marks for Range Administration and Law now combined as major subject: construction of Principal's bungalow to be expedited: "Honours" Government students to be guaranteed IV grade Rangerships: "Higher Standard" Government students to be guaranteed VI grade Rangerships: students to be given 15 days' joining time after leaving the college: House Tutor to be granted free quarters: Principal to be given an annual allotment for purchase of books: also power to have all college printing carried out locally, students' uniforms slightly modified in one suit: seigniorage not be charged on timber supplied departmentally to the college.

The majority of these recommendations have been submitted for the orders of Government.

23. Sanction of the Government of India was received this term to the proposal to pay all Government students of the rank of Deputy Rangers a fixed stipend of Rs. 50 (inclusive of travelling allowance).

24. The athletic life of the college has during the year been systematised and developed. Under the stimulus of a system of college colours, awarded only to those who attain a certain standard of efficiency, a great keenness is evident in the college games. The college was victorious in 12 out of 27 matches played. At the athletic sports meeting held in October J. A. P. D'Cruz secured the Champion Challenge Cup.

The Marathon race run in January over seven miles of undulating country at Bolamapatti was won by A. K. Kandan. Practically the whole college competed. On tour the students were instructed in swimming. Mr. Bennett since he joined the staff has been in charge of the Athletic Club. In addition to squad, fire and whistle drill which form part of the college curriculum the senior division under the leadership of student D'Cruz voluntarily trained themselves in physical drill and gave a demonstration to the Board of Visitors.

25. The stock of the college was carefully checked in October and again in July after the close of the year under report. Steps were taken to counteract several irregularities that had gradually crept in. The necessity for a detailed scrutiny of the stock and accounts by a professional officer unconnected with the College is an increasingly urgent necessity. During the year the Store-keeper's branch was entirely separated from the Head Clerk's branch of the Principal's office, and rules of office procedure were drawn up. The administration of the Head Clerk's and Store-keeper's branch was extremely unsatisfactory. The permanet Head Clerk Mr. Pattabirama Ayyar was granted leave on the grounds of ill-health in May. His successor Mr. Krishnaswami Ayyangar has effected a great improvement in the method, punctuality and efficiency of his branch of the office, but the staff is admittedly inadequate as regards both number and quality.

26. The thanks of the Principal are due to those officers in whose divisions the college has toured, for their co-operation and assistance in making all arrangements possible for the comfort of the camps. Mr. R. D. Richmond was indefatigable in affording direct help to the college during the hill tour and showed a tangible and practical interest in the engineering work of the senior division at Bandyshola, by undertaking the laborious task of correcting the Coonoor project plates. He also very kindly presented a prize for this project.

Lieut.-Colonel Fernside and his Assistants Messrs. Madhava Menon and Viswanatha Sarma were good enough to undertake and supervise the Final examination in First Aid, for which St. John Ambulance certificates were awarded to the successful students.

The college is indebted this year to several officers and well-wishers who have given books to the library and trophies to the Museum.

27. The Staff of the College has as usual worked with a whole-hearted devotion to duty, and with the single object of producing highly trained and practical Rangers. Mr. Venkatramana Ayyar's departure, after three years of strenuous work of the highest professional merit, is a serious loss to the college, and to his powers of organisation in the responsible post of House Tutor the present standard of the college discipline is in no small measure due.

*Madras Forest College, Coimbatore*,, 1914–16 *division.*

| Number and Name of Student. | Circle or State to which attached. |
|---|---|
| *Government Students.* | |
| 1. W. Balakrishna Mudaliyar ... ... ... ... | Northern Circle. |
| 2. K. Raghava Rao ... ... ... ... ... | Do. |
| 3. C. T. Tiruvengadam ... ... ... ... ... | Do. |
| 4. K. T. Venkatachar ... ... ... ... ... | Do. |
| 5. T. E. Varadachari ... ... ... ... ... | Do. |
| 6. C. M. Kunhiraman Nair ... ... ... ... | Central Circle. |
| 7. K. G. Sundararaja Rao ... ... ... ... | Do. |
| 8. A. Kannappa Mudaliyar ... ... ... ... | Do. |
| 9. M. Krishna Ayyar ... ... ... ... ... | Do. |
| 10. K. G. Srinivasa Rao ... ... ... ... ... | Do. |
| 11. Saiyid Vazih-ud-din Sigbatullohi ... ... .. | Southern Circle. |
| 12. Saiyid Manavar ... ... ... ... ... | Do. |
| 13. C. H. Ashe ... ... ... ... ... ... | Do. |
| 14. P. A. Krishnaswami Mudaliyar ... ... ... | Do. |
| 15. G. Devanayakam Nayudu ... ... ... ... | Do. |
| 16. A. P. Sreenivasa Ayyangar ... ... ... ... | Western Circle. |
| 17. A. Swamikutti ... ... ... ... ... | Do. |
| 18. P. Krishnan ... ... ... ... ... ... | Do. |
| 19. K. Kunhiroyan ... ... ... ... ... ... | Do. |
| 20. S. Srinivasa Rao ... ... ... ... ... | Do. |

*State students.*

| | |
|---|---|
| 21. D. Krishna Ayyangar ... ... ... ... | Travancore. |
| 22. T. K. Prameswaram Pillai ... ... ... ... | Do. |
| 23. K. Ramachendriah ... ... ... ... ... | Do. |
| 24. Kerala Varma Tambiran ... ... ... | Do. |
| 25. Gulam Russool ... ... ... ... ... ... | Mysore. |
| 26. Korah Fenn ... ... ... ... ... ... | Cochin. |

*Private students.*

| | |
|---|---|
| 27. B. Sambamurthi ... ... ... ... ... | Private. |
| 28. T. S. Narayanaswami Chetti ... ... ... ... | Do. |
| 29. T. R. Naganatha Ayyar ... ... ... ... | Do. |
| 30. M. N. Raman Pillai ... ... ... ... ... | Do. |

*Madras Forest College, Coimbatore.*

Summary revenue and expenditure for the Forest year 1914–15.

| Head or service. | Revenue. Rs. A. P. |
|---|---|
| *Receipts.* | |
| V (*b*) .. ... ... ... ... ... ... ... | 2,961 8 10 |
| *A.—Expenditure.* | |
| I (*c*) ... ... .. ... ... ... ... ... | 0 13 4 |
| VI (*c*) ... ... ... ... ... ... .. ... | 3,666 13 11 |
| VII (*b*) ... ... ... ... ... ... ... ... | 75 3 10 |
| VIII (*e*) ... ... ... ... ... .. ... ... | 11 8 6 |
| VIII (*g*) .. ... ... ... ... ... ... ... | 311 8 0 |
| IX (*b*) ... ... ... ... ... ... ... ... | 393 10 3 |
| Total of A. ... | 4,459 9 10 |
| *B.—* | |
| I (*b*) ... ... ... ... ... ... ... | 43,341 11 11 |
| I (*c*) ... ... ... ... ... ... .. | 19,082 10 3 |
| I (*d*) ... ... ... ... ... ... ... | 2,362 4 6 |
| II (*b*) ... ... ... ... ... ... ... | 5,381 10 0 |
| II (*c*) ... .. ... ... . ... ... | 6,074 0 4 |
| II (*d*) ... ... ... ... ... ... ... | 685 11 2 |
| III (*a*) .. ... ... ... ... ... ... | 938 6 5 |
| III (*b*) ... ... ... ... ... ... ... | 612 13 0 |
| III (*d*) ... ... ... ... ... ... ... | 6,586 12 0 |
| Total of B .. | 85,065 15 7 |
| Grand total of A and B ... | 89,525 9 5 |

ABSTRACT showing the live stock, stores, tools, etc., for the year ending with 30th June 1915.

| District. | Description of stock. | On hand at commencement of the year (from 1st July 1914). Number. | Amount. Rs. A. P. | On hand at the end of the year (up to 30th June 1915). Number. | Amount. Rs. A. P. | Difference in value in favour of the year. Rs. A. P. | Difference in value against the year. |
|---|---|---|---|---|---|---|---|
| Madras Forest College, Coimbatore. | Surveying and other instruments. | 717 | 6,270 7 7 | 1,151 | 6,944 13 9 | 674 6 2 | .. |
| | Tools .. .. | 383 | 680 3 10 | 384 | 683 3 10 | 3 0 0 | .. |
| | Furniture .. .. | 406 | 2,426 12 8 | 460 | 2,850 13 5 | 424 0 9 | .. |
| | Tents .. .. | 101 | 10,370 8 3 | 115 | 11,271 2 3 | 900 10 0 | .. |
| | Uniforms and accoutrements. | 244 | 592 11 6 | 308 | 828 6 11 | 235 11 5 | .. |
| | Science apparatus .. | 2,474 | 2,422 6 0 | 4,074 | 3,120 2 0 | 697 12 0 | .. |
| | Carpentry tools .. | .. | .. | 21 | 132 2 0 | 132 2 0 | .. |
| | Photographic instruments. | .. | .. | 2 | 604 8 0 | 604 8 0 | .. |
| | Miscellaneous .. | 455 | 1,660 3 9 | 487 | 1,737 1 9 | 76 14 0 | .. |
| | Total .. | 4,780 | 24,423 5 7 | 7,002 | 28,172 5 11 | 3,749 0 4 | .. |

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# APPENDICES.

## APPENDIX A.—Comparative statement of number and origin of fires that occurred during 1914–15.

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire traced areas. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | | |
| | | | | | By workmen employed in the forests, by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
| *Northern Circle.* | | | | | | | | | | | | |
| Ganjam | 7 | 178 | 7 | 493 | .. | .. | 28 | 2,722 | .. | .. | .. | .. |
| Vizagapatam | 2 | 345 | .. | .. | 2 | 408 | 2 | 1,592 | .. | .. | .. | .. |
| Godavari, Upper | .. | .. | 21 | 63,184 | .. | .. | 1 | .. | .. | .. | .. | .. |
| Do. Lower | .. | .. | 8 | 574 | .. | .. | 16 | 658 | .. | .. | .. | .. |
| Kistna | .. | .. | .. | .. | .. | .. | 3 | 32 | .. | .. | .. | .. |
| Kurnool, East | 2 | 323 | 6 | 5,755 | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South | 2 | 89 | 2 | 28,880 | 4 | 4,982 | 6 | 650 | 4 | 19 | .. | .. |
| Do. West | 6 | 344 | 6 | 8,479 | .. | .. | 9 | 530 | 3 | 107 | .. | .. |
| Total | 19 | 1,278 | 50 | 107,365 | 6 | 5,390 | 65 | 6,184 | 7 | 126 | .. | .. |
| *Central Circle.* | | | | | | | | | | | | |
| Bellary | 38 | 88 | .. | 90 | .. | .. | 17 | 3,092 | 4 | 266 | 1 | 320 |
| Anantapur | 3 | 7,554 | 2 | .. | 1 | 12 | 4 | 213 | .. | .. | .. | .. |
| Guntur | .. | .. | .. | .. | .. | .. | 11 | 101 | .. | .. | .. | .. |
| Cuddapah, West | 3 | 4,102 | 21 | 30,012 | 4 | 1,446 | 2 | 850 | .. | .. | .. | .. |
| Do. East | 6 | 5,790 | 29 | 22,517 | 2 | 131 | 10 | 10,675 | .. | .. | .. | .. |
| Nellore | .. | .. | 5 | 330 | .. | . | 2 | 63 | .. | .. | .. | .. |
| Chingleput | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor | .. | .. | 7 | 2,701 | .. | .. | 6 | 828 | .. | .. | .. | .. |
| Total | 50 | 17,534 | 64 | 55,650 | 7 | 1,589 | 52 | 15,822 | 4 | 266 | 1 | 320 |
| *Southern Circle.* | | | | | | | | | | | | |
| North Vellore | 3 | 191 | .. | .. | .. | .. | 1 | 18 | .. | .. | .. | . |
| South do. | .. | .. | .. | .. | .. | .. | 4 | 97 | .. | .. | .. | .. |
| South Arcot | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| North Salem | .. | .. | .. | .. | .. | .. | 4 | 935 | .. | .. | .. | .. |
| South do. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. |
| Trichinopoly | .. | .. | .. | .. | .. | .. | 9 | 141 | .. | .. | .. | .. |
| Madura | .. | .. | 20 | 1,233 | .. | .. | 2 | 435 | .. | .. | .. | .. |
| Tinnevelly | .. | .. | 7 | 212 | 4 | 953 | 3 | 6 | 1 | 35 | 2 | 326 |
| Total | 3 | 191 | 27 | 1,445 | 4 | 953 | 23 | 1,632 | 1 | 35 | 2 | 326 |
| *Western Circle.* | | | | | | | | | | | | |
| South Canara | 6 | 37 | 29 | 294 | 7 | 101 | 35 | 510 | .. | .. | .. | .. |
| Malabar, North | 1 | 40 | 1 | 9 | .. | .. | .. | .. | .. | .. | .. | .. |
| * Do. South | .. | .. | .. | .. | 1 | 100 | .. | .. | .. | .. | .. | .. |
| * The Nilgiris | 1 | 6 | .. | .. | .. | .. | 11 | 479 | .. | .. | .. | .. |
| Kollegal | 1 | 1,027 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North | 4 | 14 | .. | .. | 4 | 160 | 9 | 647 | .. | .. | .. | .. |
| Do. Central | 3 | 34 | 1 | 100 | 1 | 9 | 3 | 26 | .. | .. | .. | .. |
| Do. South | .. | .. | 2 | 71 | 7 | 218 | 3 | 258 | .. | .. | .. | .. |
| Total | 16 | 1,158 | 33 | 474 | 20 | 588 | 61 | 1,920 | .. | .. | .. | .. |
| Grand total | 88 | 20,161 | 174 | 164,934 | 37 | 8,520 | 201 | 25,558 | 12 | 427 | 3 | 646 |
| Grand total for 1913-14. | 81 | 17,065 | 183 | 226,029 | 54 | 21,380 | 306 | 57,422 | 10 | 2,563 | 13 | 719 |

* Includes the number of fires in the areas not under special protection.

## Appendix A—Comparative statement of number and origin of fires that occurred during 1914-15—*cont.*

| District. | C. Fires beginning inside the reserve or fire-traced areas—*cont.* | | | | | | | | Causes unknown. | | Total of A, B, C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | By intentional firing. | | | | | | Total. | | | | | |
| | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Northern Circle.* | | | | | | | | | | | | |
| Ganjam .. .. .. | .. | .. | 1 | 75 | 7 | 576 | 36 | 3,373 | 43 | 2,360 | 98 | 6,404 |
| Vizagapatam .. .. | .. | .. | .. | .. | .. | .. | 4 | 2,000 | 18 | 9,979 | 24 | 12,274 |
| Godavari, Upper .. | * 3 | 67 | .. | .. | .. | .. | 4 | 67 | 5 | 729 | 30 | 63,980 |
| Do. Lower .. | .. | .. | 3 | 48 | 3 | 10 | 22 | 716 | 5 | 41 | 35 | 1,331 |
| Kistna .. .. .. | .. | .. | .. | .. | .. | .. | 3 | 32 | .. | .. | 3 | 32 |
| Kurnool, East .. .. | 10 | 701 | 2 | 210 | 14 | 9,625 | 26 | 10,536 | 5 | 269 | 39 | 16,883 |
| Do. South .. .. | 5 | 17,284 | 6 | 831 | 2 | 582 | 27 | 24,348 | 36 | 24,897 | 67 | 78,213 |
| Do West .. .. | 11 | 3,095 | . | .. | 25 | 21,448 | 48 | 25,180 | 40 | 13,382 | 100 | 47,385 |
| Total .. | 29 | 21,147 | 12 | 1,164 | 51 | 32,241 | 170 | 66,252 | 152 | 51,607 | 391 | 226,502 |
| *Central Circle.* | | | | | | | | | | | | |
| Bellary .. .. .. | 26 | 7,651 | .. | .. | .. | .. | 48 | 11,329 | 48 | 7,224 | 134 | (a) 26,141 |
| Anantapur .. .. | 21 | 6,225 | .. | .. | 9 | 1,841 | 35 | 7,791 | 27 | 2,083 | 67 | 10,018 |
| Guntur .. .. | .. | .. | .. | .. | .. | .. | 11 | 101 | .. | .. | 11 | (a) 101 |
| Cuddapah, West .. | 46 | 11,886 | 5 | 847 | 15 | 8,594 | 72 | 23,623 | 5 | 2,070 | 101 | 59,807 |
| Do. East .. | 79 | 22,419 | .. | .. | 6 | 2,525 | 97 | 35,750 | 38 | 11,791 | 170 | 75,848 |
| Nellore .. .. | .. | .. | .. | .. | .. | .. | 2 | 63 | 3 | 224 | 10 | 617 |
| Chingleput .. .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 357 | 2 | 357 |
| Chittoor .. .. | 12 | 898 | 1 | 75 | 8 | 140 | 22 | 1,941 | 12 | 201 | 41 | 4,843 |
| Total .. | 184 | 49,079 | 6 | 922 | 33 | 12,600 | 287 | 80,598 | 135 | 23,950 | 536 | 177,732 |
| *Southern Circle.* | | | | | | | | | | | | |
| North Vellore .. .. | 11 | 819 | .. | .. | .. | .. | 12 | 837 | 20 | 1,189 | 35 | 2,217 |
| South do. .. .. | 23 | 1,087 | 1 | 70 | .. | .. | 28 | 1,254 | 14 | 461 | 42 | 1,715 |
| South Arcot .. .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 3 | 9 | 4 | 9 |
| North Salem .. .. | .. | .. | .. | .. | 1 | 3 | 5 | 938 | 38 | 3,964 | 43 | 4,932 |
| South do. .. .. | 1 | 16 | .. | .. | .. | .. | 1 | 16 | 22 | 673 | 23 | 689 |
| Trichinopoly .. .. | .. | .. | .. | .. | 1 | 5 | 10 | 146 | .. | .. | 10 | 146 |
| Madura .. .. .. | 3 | 305 | 1 | 150 | 10 | 572 | 16 | 1,462 | 27 | 911 | 63 | 3,606 |
| Tinnevelly .. .. | 10 | 4,046 | 3 | 87 | 2 | 1,565 | 25 | 7,018 | 6 | 201 | 38 | 7,431 |
| Total .. | 48 | 6,273 | 5 | 307 | 15 | 2,145 | 98 | 11,671 | 130 | 7,408 | 258 | 20,715 |
| *Western Circle.* | | | | | | | | | | | | |
| South Canara .. .. | 8 | 91 | 7 | 172 | 1 | 1 | 58 | 875 | 22 | 600 | 115 | 1,806 |
| Malabar, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 49 |
| † Do. South .. .. | .. | .. | .. | .. | .. | .. | 1 | 100 | 1 | 10 | 2 | 110 |
| † The Nilgiris .. .. | .. | .. | .. | .. | .. | .. | 11 | 479 | .. | .. | 12 | 485 |
| Kollegal .. .. | 2 | 1,160 | 5 | 5,720 | 8 | 2,451 | 15 | 9,331 | .. | .. | 16 | 10,368 |
| Coimbatore, North .. | .. | .. | .. | .. | .. | .. | 13 | 807 | 13 | 8,260 | 30 | 9,081 |
| Do. Central .. | .. | .. | 1 | 7 | 1 | 7 | 6 | 49 | 3 | 75 | 13 | 258 |
| Do. South .. | 3 | 29 | 1 | 6,400 | 1 | 1 | 15 | 6,906 | 1 | 200 | 18 | 7,177 |
| Total .. | 13 | 1,280 | 14 | 12,299 | 11 | 2,460 | 119 | 18,547 | 40 | 9,145 | 208 | 29,324 |
| Grand total .. | 274 | 77,779 | 37 | 14,692 | 110 | 49,446 | 674 | 177,068 | 457 | 92,110 | 1,393 | 454,273 |
| Grand total for 1913-14. | 211 | 48,445 | 33 | 21,199 | 97 | 67,482 | 724 | 219,210 | 762 | 253,976 | 1,750 | 716,280 |

* To facilitate collection of bassia flowers.
† Includes the number of fires in the areas not under special protection.
(a) Includes 20,859 and 49 acres, respectively, burnt in unprotected blocks.

APPENDIX B.—Comparative statement of impounded cattle (1914–15).

| District. | Number of cattle impounded. | | Average for three years ending 1914-15. |
|---|---|---|---|
| | 1913–14. | 1914–15. | |
| *Northern Circle.* | | | |
| Ganjām .. .. .. .. | 852 | 1,160 | 1,395 |
| Vizagapatam .. .. .. | 1,194 | 1,057 | 1,039 |
| Godavari Upper .. .. .. | 386 | 293 | 311 |
| Do. Lower .. .. .. | 797 | 1,167 | 1,069 |
| Kistna .. .. .. .. | 2,729 | 3,452 | 3,301 |
| Kurnool, East .. .. .. | 9,937 | 8,962 | 7,703 |
| Do. South .. .. .. | 3,049 | 5,332 | 3,454 |
| Do. West .. .. .. | 15,037 | 11,600 | 12,523 |
| Total .. | 33,981 | 33,023 | 30,795 |
| *Central Circle.* | | | |
| Bellary .. .. .. .. | 13,797 | 13,770 | 15,514 |
| Anantapur .. .. .. .. | 9,859 | 10,376 | 10,348 |
| Guntūr .. .. .. .. | 19,536 | 28,178 | 24,851 |
| Cuddapah West .. .. .. | 11,872 | 8,800 | 9,017 |
| Do East .. .. .. | 5,631 | 5,569 | 5,626 |
| Nellore .. .. .. .. | 17,725 | 15,178 | 17,272 |
| Chingleput .. .. .. .. | 4,694 | 8,322 | 5,746 |
| Chittoor .. .. .. .. | 9,523 | 8,983 | 8,936 |
| Total .. | 92,637 | 99,176 | 97,310 |
| *Southern Circle.* | | | |
| North Vellore .. .. .. | 7,331 | 7,989 | 8,260 |
| South do. .. .. .. | 4,613 | 7,884 | 6,559 |
| South Arcot .. .. .. | 15,820 | 24,650 | 18,526 |
| North Salem .. .. .. | 4,873 | 4,418 | 4,574 |
| South do. .. .. .. | 3,847 | 6,708 | 3,546 |
| Trichinopoly .. .. .. | 9,182 | 5,561 | 7,261 |
| Madura .. .. .. | 5,834 | 7,318 | 6,917 |
| Tinnevelly .. .. .. | 3,663 | 2,328 | 2,666 |
| Total .. | 55,163 | 66,856 | 58,309 |
| *Western Circle.* | | | |
| South Canara .. .. .. | 609 | 747 | 895 |
| Malabar, North .. .. .. | 30 | 82 | 128 |
| Do. South .. .. .. | 81 | 83 | 152 |
| The Nilgiris .. .. .. | 378 | 959 | 490 |
| Kollegal .. .. .. .. | 3,388 | 3,031 | 3,357 |
| Coimbatore, North .. .. .. | 2,061 | 2,437 | 3,568 |
| Do. Central .. .. | 987 | 1,411 | 1,924 |
| Do. South .. .. .. | 1,399 | 588 | 996 |
| Total .. | 8,933 | 9,338 | 11,510 |
| Grand Total .. | 190,714 | 208,393 | 197,924 |

* Revised figure furnished by the Collector.

## ANNUAL FORM No. 65.

*Forest Department, Madras Presidency.*

AREA of reserved forests and reserved lands during 1914–15.

| District. | Area of reserved forests. | | | | | |
|---|---|---|---|---|---|---|
| | Area on 1st July 1914. | | Added during the year. | Excluded during the year. | Area on 30th June 1915. | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres | Equivalent in square miles. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| *Northern Circle.* | | | | | | |
| Ganjām | 364,132 | 569 | .. | .. | 364,132 | 569 |
| Vizagapatam | 193,832 | 303 | 5,181 | .. | 199,013 | 311 |
| Gōdāvari, Upper | 273,751 | 428 | .. | .. | 273,751 | 428 |
| Do. Lower | 258,276 | 404 | .. | .. | 258,276 | 404 |
| Kistna | 177,328 | 277 | 8,284 | 7,229 | 178,383 | 271 |
| Kurnool, East | 640,302 | 1,000 | .. | .. | 640,302 | 1,000 |
| Do. South | 490,439 | 766 | 68 | 42 | 490,465 | 766 |
| Do. West | 555,071 | 867 | .. | .. | 555,071 | 867 |
| Total | 2,953,131 | 4,614 | 8,533 | 7,271 | 2,954,393 | 4,616 |
| *Central Circle.* | | | | | | |
| Bellary | 401,361 | 627 | 23 | (*h*) 4,940 | 396,444 | 619 |
| Anantapur | 475,321 | 743 | .. | .. | 475,321 | 743 |
| Guntūr | 521,247 | 814 | .. | .. | 521,247 | 814 |
| Cuddapah, West | 470,073 | 734 | .. | .. | 470,073 | 734 |
| Do. East | 693,364 | 1,083 | 107 | .. | 693,471 | 1,084 |
| Nellore | 472,021 | 738 | (*g*) 4,397 | (*i*) 10,002 | 466,396 | 729 |
| Chingleput | 133,973 | 209 | 10 | 529 | 133,454 | 209 |
| Chittoor | 537,155 | 840 | 21 | 706 | 536,470 | 838 |
| Total | 3,704,495 | 5,788 | 4,558 | 16,177 | 3,692,876 | 5,770 |
| *Southern Circle.* | | | | | | |
| North Vellore | 313,063 (*a*) − 7 (*b*)+ 2,118 | 489 (*b*) + 3 | 1 | 1,046 | 314,129 | 491 |
| South do. | 457,783 (*b*)− 2,118 | 715 (*b*) − 3 | .. | (*d*) 72 | 455,593 | 712 |
| South Arcot | 215,796 | 337 | .. | 972 | 214,824 | 336 |
| North Salem | 507,374 | 792 | .. | .. | 507,374 | 792 |
| South do. | 371,762 | 581 | .. | 81 | 371,681 | 581 |
| Trichinopoly *cum* Tanjore | 226,994 (*c*)+ 104 | 355 | .. | .. | 227,098 | 355 |
| Madura | 422,888 | 661 | 16 (*e*) 112 | 155 (*e*) 2,026 | 420,835 | 657 |
| Tinnevelly *cum* Rāmnād | 274,300 | 429 | .. | (*f*) 2 | 274,298 | 429 |
| Total | 2,789,966 + 97 | 4,359 | 129 | 4,354 | 2,785,832 | 4,353 |
| *Western Circle.* | | | | | | |
| South Canara | 510,590 | 798 | 251 | 95 | 510,746 | 798 |
| Malabar, North | 167,785 | 262 | 313 | .. | 168,098 | 263 |
| Do. South | 69,405 | 108 | 22,120 | .. | 91,525 | 143 |
| The Nilgiris | 303,984 | 475 | .. | 65 | 303,919 | 475 |
| Kollegal | 467,166 | 730 | 79 | 33 | 467,212 | 730 |
| Coimbatore, North | 589,951 | 922 | 27 | .. | 589,978 | 922 |
| Do. Central | 225,932 | 353 | 8 (*g*) 23 | .. | 225,963 | 353 |
| Do. South | 290,652 | 454 | .. | .. | 290,652 | 454 |
| Total | 2,625,465 | 4,102 | 22,821 | (*h*) 193 | 2,648,093 | 4,138 |
| Grand total | 12,073,148 | 18,863 | 36,041 | 27,995 | 12,081,194 | 18,877 |

(*a*) Represents area disafforested in 1911 and omitted to be shown in previous returns.
(*b*) ,, transfer from South to North Vellore.
(*c*) Correct figures furnished by the Collector.
(*d*) Deducted as per actual area found on demarcation of a reserve.
(*e*) On account of recomputation of areas investigated by the Special Deputy Collector.
(*f*) Area already included under reserve now transferred for re-settlement.
(*g*) Recomputation of areas.
(*h*) Disafforested.
(*i*) 8,610 acres (13 square miles) by correct computation of areas and 1,392 acres (2 square miles) by disafforestation.

## Area of reserved forests and reserved lands during 1914–15—*cont.*

| District. | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|
| | Area on 1st July 1914. | | Added during the year. | Excluded during the year. | Area on 30th June 1915. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Northern Circle.* | | | | | | | |
| Ganjām | 44,480 | 70 | .. | .. | 44,480 | 70 | 639 |
| Vizagapatam | 6,727 | (*b*) 10 | 385 | 5,400 | 1,712 | (*b*) 3 | 314 |
| Gōdāvari, Upper | 226,489 | 354 | .. | .. | 226,489 | 354 | 782 |
| Do. Lower | 47,955 | 75 | .. | .. | 47,955 | 75 | 479 |
| Kistna | .. | .. | .. | .. | .. | .. | 271 |
| Kurnool, East | .. | .. | .. | .. | .. | .. | 1,000 |
| Do. South | 69 | (*a*) .. | .. | 69 | .. | .. | 766 |
| Do. West | .. | .. | .. | .. | .. | .. | 867 |
| Total | 325,720 | 509 | 385 | 5,469 | 320,636 | 502 | 5,118 |
| *Central Circle.* | | | | | | | |
| Bellary | 40,023 | 63 | .. | 23 | 40,000 | 63 | 682 |
| Anantapur | 6,578 | 10 | .. | .. | 6,578 | 10 | 753 |
| Guntūr | .. | .. | .. | .. | .. | .. | 814 |
| Cuddapah, West | .. | .. | .. | .. | .. | .. | 734 |
| Do. East | 107 | .. | 158 | 107 | 158 | .. | 1,084 |
| Nellore | .. | .. | .. | .. | .. | .. | 729 |
| Chingleput | 19 | .. | .. | 10 | 9 | .. | 209 |
| Chittoor | 21 | .. | 42 | 21 | 42 | .. | 838 |
| Total | 46,748 | 73 | 200 | 161 | 46,787 | 73 | 5,843 |
| *Southern Circle.* | | | | | | | |
| North Vellore | 73 | .. | .. | 1 | 72 | .. | 491 |
| South do. | 27 | .. | .. | .. | 27 | .. | 712 |
| South Arcot | .. | .. | .. | .. | .. | .. | 336 |
| North Salem | 29,290 | 46 | .. | .. | 29,290 | 46 | 838 |
| South do. | 11,620 | 18 | .. | .. | 11,620 | 18 | 599 |
| Trichinopoly *cum* Tanjore | 4,610 | 7 | 1,159 | .. | 5,769 | 9 | 364 |
| Madura | 20 | .. | 6 | 16 | 10 | .. | 657 |
| Tinnevelly *cum* Rāmnād | 72 | .. | 2 | .. | 74 | .. | 429 |
| Total | 45,712 | 71 | 1,167 | 17 | 46,862 | 73 | 4,426 |
| *Western Circle.* | | | | | | | |
| South Canara | 346 | 1 | 5 | 251 | 100 | .. | 798 |
| Malabar, North | 313 | .. | .. | 313 | .. | .. | 263 |
| Do. South | 34,925 | 55 | .. | 22,120 | 12,805 | 20 | 163 |
| The Nilgiris | 49,590 | 77 | 242 | .. | 49,832 | 78 | 558 |
| | * 2,918 | 5 | .. | .. | 2,918 | 5 | |
| Kollegal | 489 | 1 | 33 | 79 | 443 | 1 | 731 |
| Coimbatore, North | 129 | .. | 127 | 27 | 229 | .. | 922 |
| Do. Central | 6,402 | 10 | 56 | 8 | 6,450 | 10 | 363 |
| Do. South | 142 | .. | .. | .. | 142 | .. | 454 |
| Total | 95,254 | 149 | 463 | (*c*)22,798 | 72,919 | 114 | 4,252 |
| Grand Total | 513,434 | 802 | 2,215 | 28,445 | 487,204 | 762 | 19,639 |

* Toda patta lands.

(*a*) Less than half a square mile.

(*b*) Includes 2·05 square miles of Karakavalasa leased forests and its east and west blocks.

(*c*) Transferred to reserved forests.

ANNUAL

*Forest Department,*

STATEMENT showing the progress made in, and the

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts. | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Northern* |
| | SQ. MLS. | | | SQ. MLS. | RS. | RS. | RS. |
| Ganjām .. | 569 | .... | .... | .. | .. | .. | .. |
| Vizagapatam | 303 | G.O. No. 550, Revenue, dated 1st March 1915. | Sarugudu block VI .. .. | (*a*) 8·09 | .. | .. | .. |
| Gōdāvari, Upper. | 428 | .... | .... | .. | .. | .. | .. |
| Gōdāvari, Lower. | 404 | .... | .... | .. | .. | .. | .. |
| Kistna .. | (*b*) 271 | .... | .... | .. | .. | .. | .. |
| Kurnool, East. | 1,000 | .... | .... | .. | .. | .. | .. |
| Kurnool, South. | 766 | G.O. No. 848, Revenue, dated 9th April 1915. | South Veligonda extension II. | 0·10 | .. | .. | .. |
| | | G.O. No. 298, Revenue, dated 3rd February 1915. | Pyapalli addition I .. .. | 0·005 | .. | .. | .. |
| Kurnool, West. | 867 | .... | .... | .. | .. | .. | .. |
| Total .. | 4,608 | | | 8·195 | .. | .. | .. |
| | | | | | | | *Central* |
| Bellary .. | 619 | G.O. No. 1559, Revenue, dated 28th May 1914. | Enclosure to Neraniki reserve. | 0·04 | .. | .. | .. |
| Anantapur.. | 743 | .... | .... | .. | .. | .. | .. |
| | | .... | .... | .. | .. | .. | .. |
| Guntūr .. | 814 | .... | .... | .. | .. | .. | .. |
| Cuddapah, West. | 734 | .... | .... | .. | .. | .. | .. |
| Cuddapah, East. | 1,084 | G.O. No. 2626, Revenue, dated 11th September 1914. | Sancherla extension C .. | 0·167 | .. | .. | .. |
| | .. | .... | .... | .. | .. | .. | .. |

NOTE.—This estimate will include all reserved lands under section 26 and unreserved lands.

(*a*) 0·34 square miles of area given in excess in previous year excluded at settlement.

(*b*) Difference of 6 square miles is due to—

(1) Disafforestation—11·29.

(2) Rectification of boundaries + 5·13.

FORM No. 66.

*Madras Presidency, Northern Circle.*

expenditure incurred on, Forest Settlements during 1914–15.

| Areas undergoing settlement. | | | | | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | Expenditure incurred during the year on areas undergoing settlement. | | |
| Name of tract. (9) | Area in square miles. (10) | Name of tract. (11) | Area in square miles. (12) | In forest accounts. (13) | In other accounts. (14) | (15) |
| *Circle.* | | | | | | |
| | SQ. MLS. | | SQ. MLS. | RS. | RS. | SQ. MLS. |
| Chokkapad .. .. .. | 69·50 | .... | .. | .. | .. | .. |
| .... | .. | Busilkota and Rayipalem .. | 0·60 | .. | .. | .. |
| Pedamidisileru .. .. .. | 96·48 | .... | .. | .. | .. | .. |
| Pedakonda extension I .. | 1·23 | .... | .. | .. | .. | .. |
| Tulluvada extension V .. | 0·50 | .... | .. | .. | .. | .. |
| Enakuru extension II .. | 0·50 | .... | .. | .. | .. | .. |
| Nugur block .. .. | 246·61 | .... | .. | .. | .. | .. |
| Marrigura reserve, Busipakala enclosure. | 1·88 | .... | .. | .. | .. | .. |
| Valsugri reserve, Korrajulagudem extension I. | 1·93 | .... | .. | .. | .. | .. |
| Gummadakonda extension III to the Rekapalli hill reserve. | 2·40 | .... | .. | .. | .. | .. |
| Dhanukonda extension IV to the Rekapalli hill reserve. | 1·53 | .... | .. | .. | .. | .. |
| Kansulur reserve, Vandalurgondi extension I. | 0·82 | .... | .. | .. | .. | .. |
| Coringa extension .. .. | 75 | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | 498·38 | .... | 0·60 | .. | .. | .. |
| *Circle.* | | | | | | |
| .... | .. | .... | .. | .. | .. | .. |
| Yerrakonda extension No. II. | 9·80 | Addition to Amagondapalyam reserve. | 0·02 | .. | .. | .. |
| Bhadrapur extension .. .. | 0·56 | Addition to Peddoddi reserve. | 0·09 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | Faridpenta enclosure to Palakondas. | 0·024 | .. | .. | 180 |
| .... | .. | Thummalabylu .. .. | 0·116 | .. | .. | .. |
| .... | .. | Palakondas .. .. .. | 0·13 | .. | .. | .. |

Statement showing the progress made in, and the expenditure

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts. | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Central* |
| | SQ. MLS. | | | SQ. MLS. | RS. | RS | RS. |
| Nellore .. | 729 | .... | .... | .. | .. | .. | .. |
| Chingleput. | 209 | G.O. No. 376, Revenue, dated 9th February 1915. | Perungoli extension No. II. .. | 0·020 | .. | .. | .. |
| Chittoor .. | 838 | G O. No. 2436, Revenue, dated 22nd August 1914. | Addition to Bommasamudram C. | ·025 | .. | .. | .. |
| | | G.O. No. 3101, Revenue, dated 29th October 1914. | Addition to Whiteside's garden. | ·004 | .. | .. | .. |
| | | G.O. No. 651, Revenue, dated 11th March 1915. | Addition to Marella and its extension. | ·004 | .. | .. | .. |
| Total .. | 5,770 | | | 0·260 | .. | .. | .. |
| | | | | | | | *Southern* |
| Vellore, North. | 489<br>(*a*) + 3<br>(*b*) — 1 | G.O. No. 3003, Rev., dated 15th October 1914. | Panamadangi reserve, Survey No. 18 of Vandrantangal village. | 0·0020 | .. | .. | .. |
| Vellore, South. | 715<br>(*a*)— 8 | .... | .... | .. | .. | .. | .. |
| Arcot, South. | 337<br>(*b*)— 1 | .... | .... | .. | .. | .. | .. |
| Salem, North. | 792 | .... | .... | .. | .. | .. | .. |
| Salem, South. | 581 | .... | .... | .. | .. | .. | .. |
| Trichinopoly *cum* Tanjore. | 355 | .... | .... | .. | .. | .. | .. |
| Madura .. | 661<br>(*c*)— 4 | G.O. No. 375, Rev., dated 9th February 1915. | Addition to Adukkam .. | 0·0007 | .. | .. | .. |
| | | G.O. No. 2239, Rev., dated 4th August 1914. | Southern slopes .. .. | 0·0137 | 47 | .. | .. |
| | | G.O. No. 2435, Rev., dated 22nd August 1914. | Kokkuparai .. .. .. | 0·0118 | .. | .. | .. |
| Tinnevelly *cum* Ramnad. | 429 | .... | .... | .. | .. | .. | .. |
| Total .. | 4,359<br>— 6 | | | 0·0282 | 47 | .. | .. |
| Grand Total. | 4,353 | | | 0·0282 | 47 | .. | .. |

(*a*) Transfer from South to North Vellore.
(*b*) Disafforested area deducted.
(*c*) Excluded on account of areas investigated by the Special Deputy Collector and disafforested.

incurred on, forest settlements during 1914–15—*cont.*

| Areas undergoing settlement. | | | | | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | Expenditure incurred during the year on areas undergoing settlement. | | |
| Name of tract. (9) | Area in square miles. (10) | Name of tract. (11) | Area in square miles. (12) | In forest accounts. (13) | In other accounts. (14) | (15) |
| *Circle*—cont. | | | | | | |
| | | | | RS. | RS. | SQ. MLS. |
| .... | .. | .... | .. | .. | .. | .. |
| Nandambakkam extension No. II. | 0·01 | .... | .. | .. | .. | .. |
| .... | .. | Addition to Gundlur reserve .. | 0·015 | .. | .. | .. |
| .... | .. | Addition to Ankalammakonda | ·05 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | 10·37 | | 0·445 | .. | .. | 180 |
| *Circle.* | | | | | | |
| Sholavandan reserve .. .. | 0·0281 | .... | .. | .. | .. | .. |
| Karapattu extension .. .. | 0·0844 | .... | .. | .. | .. | .. |
| Singarapet extension, Survey Nos. 129 and 130 of Sembarai village. | 0·0344 | .... | .. | .. | .. | .. |
| Andiappanur reserve, Survey Nos. 260 and 261 of Andiappanur village. | 0·0062 | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| Hudaiadurgam .. .. | 46 | .... | .. | .. | .. | .. |
| Arana .. .. .. .. | 3 | .... | .. | .. | .. | .. |
| Tirthagiri .. .. .. | 3 | .... | .. | .. | .. | .. |
| Jarugamalai .. .. .. | 12·230 | .... | .. | .. | .. | .. |
| Vengur padugais .. .. | 1·000 | Ariyur shola .. .. .. | 1·8100 | .. | .. | .. |
| Palamalai extension .. | 1·390 | .... | .. | .. | .. | .. |
| V. Kanapadi extension .. | 1·000 | .... | .. | .. | .. | .. |
| Gundur extension .. .. | 3·850 | .... | .. | .. | .. | (*d*) 8·73 |
| Southern slopes .. .. | 0·0062 | Adukkam .. .. .. | 0·0082 | .. | .. | .. |
| .... | .. | Pambar .. .. .. | 0·0014 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| Mailodai and Tirukuttuchalaparvathan estates. | 0·114 | Srivilliputtur ghat forest .. | 0·0027 | .. | .. | .. |
| | 71·7433 | | 1·8223 | .. | .. | 8·73 |
| | 71·7433 | | 1·8223 | .. | .. | 8·73 |

(*d*) Difference abandoned.

Statement showing the progress made in, and the Expenditure

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts. | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Western* |
| | SQ. MLS. | | | | RS. | RS. | RS. |
| South Canara. | 798 | G.O. No. 2672, dated 16th Sept. 1914. | Mudugalpare extension No. 1. | ·02 | .. | .. | .. |
| | | Do. | Naravi extension No. VI .. | ·04 | .. | .. | .. |
| | | G.O. No. 3224, dated 10th Nov. 1914. | Ballimane extension No. III. | ·32 | .. | .. | .. |
| | | G.O. No. 762, dated 26th March 1915. | Tombettu extension No. II .. | ·02 | .. | .. | . |
| Total .. | 798 | | | ·40 | .. | .. | .. |
| Malabar, North. | 262 | G.O. No. 2482, dated 27th August 1914. | Chammatti malai estate (Hilldale addition). | ·32 | .. | .. | .. |
| | | G.O. No. 2483, dated 27th August 1914. | Mangalad estate (Peria addition). | ·13 | .. | . | .. |
| Total .. | 262 | | | ·45 | .. | .. | .. |
| Malabar, South. | 108 | G.O. No. 1438, dated 18th May 1914. | Silent Valley .. .. .. | 35 | .. | .. | .. |
| The Nilgiris. | 475 | .. . | .. . | ... | .. | .. | .. |
| Total .. | 475 | | | .. | .. | .. | . |
| Kollegal .. | 730 | G.O. No. 652, Rev., dated 11th March 1915. | Addition to Doddasampagai extension first bit. | ·009 | .. | .. | .. |
| . | .. | G.O. No. 379, Rev., dated 9th February 1915. | Chikkailoru extension No. I. | ·091 | .. | .. | .. |
| .. | .. | G.O. No. 761, Rev., dated 26th March 1915. | Cowdalli addition No. I .. | ·023 | .. | .. | .. |
| Total .. | 730 | | | ·123 | .. | .. | .. |
| Coimbatore, North. | 922 | G.O. No. 2548, Rev., dated 2nd September 1914. | South Bargur addition .. | ·042 | .. | .. | .. |
| Total. | 922 | | | ·042 | .. | .. | .. |
| Coimbatore, Central. | 353 | G.O. No. 374, Rev., dated 9th February 1915. | Survey Nos 397 and 402 of Sojjalatti village in Modur reserve. | ·01 | 88 | .. | .. |
| Total .. | 353 | | | ·01 | 88 | .. | .. |
| Coimbatore, South. | 454 | .... | .... | .. | .. | .. | .. |
| Total .. | 454 | | | .. | .. | .. | .. |
| Grand total. | 4,102 | | | 36·02 or 36 | 88 | .. | .. |

incurred on, Forest Settlements during 1914-15—*cont.*

| Areas undergoing settlement. | | | | | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | Expenditure incurred during the year on areas undergoing settlement. | | |
| Name of tract. | Area in square miles. | Name of tract. | Area in square miles. | In forest accounts. | In other accounts. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| *Circle.* | | | | | | |
| | | | | RS. | RS. | SQ. MLS. |
| Aletti addition No. I .. | ·006 | Subramanya extension No. I .. | ·007 | .. | .. | .. |
| Madibare extension No. I .. | ·140 | .... | .. | .. | .. | .. |
| Do. No. II.. | | | | | | |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | ·146 | | ·007 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | Snowdon addition .. .. | ·008 | .. | .. | .. |
| | | Benne addition No. III .. | ·135 | .. | .. | .. |
| | | Do. No. IV .. | ·098 | .. | .. | .. |
| | | Ammankaval addition No. IV. | ·027 | .. | .. | .. |
| | | Cherambadi addition No. V .. | ·047 | .. | .. | .. |
| | | Kalmalai addition ... .. | ·064 | .. | .. | .. |
| | | | ·379 | .. | .. | .. |
| Hanur addition A .. .. | ·023 | Chikkailuru extension Nos. 3 and 4. | ·051 | 1,202 | .. | 1 |
| Do. B .. .. | ·001 | .... | .. | .. | .. | .. |
| Do. C .. .. | ·006 | .... | .. | .. | .. | .. |
| Yedaralli addition No. 1 .. | ·036 | .... | .. | .. | .. | .. |
| Do. No. 2 .. | ·253 | .... | .. | .. | .. | .. |
| Do. No. 3 .. | ·016 | .... | .. | .. | .. | .. |
| Do. No. 4 .. | ·003 | .... | .. | .. | .. | .. |
| Do. No. 5 .. | ·030 | .... | .. | .. | .. | .. |
| Do. No. 6 .. | ·160 | .... | .. | .. | .. | .. |
| Chikkailuru extension No. 2. | ·006 | .... | .. | .. | .. | .. |
| Chikkailur addition No. I .. | ·103 | .... | .. | .. | .. | .. |
| | ·637 | | ·051 | 1,202 | .. | 1 |
| Enclosures in South Bargur reserve and its additions. | ·160 | Enclosures in North Bargur reserve and its additions. | ·198 | .. | .. | .. |
| | ·16 | | ·198 | .. | .. | .. |
| Anaikattu block, North .. | 1·760 | Thadagam additions Nos. 2 to 20 | ·087 | 199 | .. | .. |
| Do. South .. | 7·360 | ..... | .. | .. | .. | .. |
| Survey Nos. 93A and 93B of Kummarampalayam (enclosures in Gopinari reserve). | ·0060 | .. | .. | .. | .. | .. |
| Sundapatti additions Nos. 2 to 20. | ·800 | .... | .. | .. | .. | .. |
| Addition to Thadagam block No. IV. | ·060 | .... | .. | .. | .. | .. |
| | 9·986 | | ·087 | 199 | .. | .. |
| Additions to Anamalai reserve. | ·08 | .... | .. | 2,850 | .. | .. |
| Additions to Punachi reserve No. II. | ·14 | .... | .. | .. | .. | .. |
| | ·22 | | .. | 2,850 | .. | .. |
| | 11·14 | | ·72 | 4,251 | .. | 1 |

## ANNUAL FORM No. 67.

*Forest Department, Madras Presidency.*

RECORD of demarcation and maintenance of boundaries.

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Northern Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Ganjam .. .. | (*b*) & (*n*) 107 | (*a*) 1,094<br>(*o*) 36 | (*p*) 127 | (*q*) 1,364 | 4 | (*r*) 80 | (*b*) & (*s*) 1,448 | (*t*) 2,450 | 170 |
| Vizagapatam .. .. | .. | (*a*) 530<br>10 | .. | 540 | .. | .. | 540 | .. | 247 |
| Godavari, Upper .. | .. | 425 | .. | 425 | .. | 143 | 568 | .. | 899 |
| Do. Lower .. | .. | (*a*) 748<br>26 | 10 | 784 | .. | 52 | 836 | .. | (*c*) 929 |
| Kistna .. .. | .. | (*a*) 201<br>60 | 308 | 569 | .. | 41 | (*f*) 610 | .. | 316 |
| Kurnool, East .. | .. | (*a*) 579<br>108 | 16 | 703 | .. | 48 | 751 | .. | (*d*) 210 |
| Do. South .. | .. | (*a*) 25<br>576 | 28 | 629 | .. | 5 | 634 | .. | 284 |
| Do. West .. | .. | (*a*) 688<br>56 | 186 | 930 | .. | 100 | 1,030 | .. | (*e*) 220 |
| Total .. | 107 | (*a*) 3,865<br>1,297 | 675 | 5,944 | 4 | 469 | 6,417 | 2,450 | 3,275 |
| *Central Circle.* | | | | | | | | | |
| Bellary .. .. | 16 | .. | 1,730 | 1,746 | 6 | .. | 1,752 | 830 | (*g*) 591 |
| Anantapur .. .. | .. | 56 | 1,769 | 1,825 | .. | .. | 1,825 | . | 1,830 |
| Guntur .. .. | .. | 111 | 1,281 | 1,392 | .. | | 1,392 | . | 937 |
| Cuddapah, West .. | .. | 27<br>(*a*) 540 | 811 | 1,378 | .. | 29 | 1,407 | .. | (*h*) 678 |
| Do. East .. | .. | 97<br>(*a*) 485 | 333 | 915 | .. | 46 | 961 | .. | 2,520 |
| Nellore .. .. | .. | 1,794 | 275 | 2,069 | ... | 84 | 2,153 | .. | 1,792 |
| Chingleput .. .. | .. | 188<br>(*a*) 716 | .. | 904 | .. | .. | 904 | .. | 1,314 |
| Chittoor .. .. | .. | 1,466 | 4 | 1,470 | .. | 50 | 1,520 | .. | 2,711 |
| Total .. | 16 | 3,739<br>(*a*) 1,741 | 6,203 | 11,699 | 6 | 209 | 11,914 | 830 | 12,373 |
| *Southern Circle.* | | | | | | | | | |
| North Vellore .. | .. | (*a*) 1,139 | .. | 1,139 | .. | 7 | (*i*) 1,146 | .. | 9 |
| South do. .. | .. | (*a*) 1,118<br>28 | .. | 1,146 | .. | 22 | (*j*) 1,168 | .. | 212 |
| South Arcot .. .. | .. | 1,152 | .. | 1,152 | .. | .. | (*k*) 1,152 | .. | 107 |
| North Salem .. .. | 7 | (*a*) 1,016 | 306 | 1,329 | .. | 40 | 1,369 | 325 | 123 |
| South do. .. .. | .. | (*a*) 892<br>239 | 12 | 1,143 | .. | 5 | 1,148 | .. | 989 |
| Trichinopoly *cum* Tanjore. | .. | (*a*) 936<br>65 | 91 | 1,092 | 11 | 24 | (*l*) 1,127 | .. | 605 |
| Madura .. .. | 48 | (*a*) 998 | 330 | 1,376 | 178 | 178 | 1,732 | 3,405 | 3 |
| Tinnevelly *cum* Ramnad. | .. | 34 | 470 | 504 | .. | 14 | (*m*) 518 | .. | 781 |
| Total .. | 55 | 1,518<br>(a) 6,099 | 1,209 | 8,881 | 189 | 290 | 9,360 | 3,730 | 2,829 |

(*a*) Cleared by Forest subordinates free of cost.
(*b*) Previous year's figures were incorrect.
(*c*) Excludes Rs. 711 spent for demarcating felled coupes in the Rajahmundry, Polavaram and Gokavaram Ranges.
(*d*) Excludes Rs. 75 spent on altering a portion of the boundary line between Dornal and Morricheruvu ranges.
(*e*) Excludes Rs. 915 spent on cutting the newly-proposed Sivapuram range boundary.
(*f*) The figure in column 8 differs from that of last year as certain reserves were disafforested during the year.
(*g*) Includes Rs. 72 being cost of cutting a twelve feet line around sandal reserve.
(*h*) Includes Rs. 10 spent on cutting and chiselling compartment stones.
(*i*) Difference due to disafforestation of certain reserves and transfer of a reserve from South Vellore.
(*j*) Due to transfer of a reserve to North Vellore and correct demarcation of Kapalur reserve.
(*k*) Difference due to disafforestation of reserves.
(*l*) Revised figures furnished by the District Forest officer.
(*m*) Increase due to addition of 30 miles in 1913-14 and omitted to be shown in that year's return.
(*n*) Excludes 21 miles of boundaries belonging to the Parlakimedi Maliahs.
(*o*) Do. 414 do. do. do.
(*p*) Do. 23 do. do. do.
(*q*) Do. 458 do. do. do.
(*r*) Do. 14 do. do. do.
(*s*) Do. 472 do. do. do.
(*t*) Excludes Rs. 214 spent in Parlakimedi Maliahs.

## Record of demarcation and maintenance of boundaries during 1914-15—*cont.*

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of the year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Western Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| South Canara .. | .. | 117 | 3,595<br>(c) —2 | 3,710 | 46 | 124<br>(c) —3 | 3,877 | (d) 65 | 1,343 |
| Malabar, North .. | .. | 182 | 1,000 | 1,182 | 30 | 36 | 1,228 | .. | 55 |
| Do. South .. | .. | 62<br>(a) 1 | 64 | 131 | 20 | 55 | 206 | .. | 24 |
| The Nilgiris .. .. | .. | 2<br>(a) 16 | 1,596<br>(c) —1 | 1,613 | .. | 299 | 1,912 | .. | 96<br>(e) 15<br>(f) 189 |
| Kollegal .. .. | 58 | 1 | 102<br>(c) —1 | 164 | 240<br>(c) —2 | 87 | 489 | 977 | 148 |
| Coimbatore, North .. | 1 | 75<br>(a) 306 | 781 | 543 | 28 | 110 | 681 | (g) 103 | 2,760 |
| Do. Central. | 9 | 47<br>(a) 258 | 273 | 583 | 13 | 44 | 640 | 125 | 518<br>(e) 153 |
| Do. South .. | .. | 7<br>(b) 2<br>(a) 115 | 94 | 214 | .. | 52 | 266 | .. | 84 |
| Total .. | 68 | 479<br>(a) 695 | 6,878 | 8,120 | 375 | 804 | 9,299 | 1,270 | 5,385 |
| Grand total .. | 246 | 7,033<br>(a) 12,400 | 14,965 | 34 644 | 574 | 1,772 | 36,990 | 8,280 | 23,862 |

(a) Cleared by subordinates free of cost
(b) Frontier boundaries the cost of demarcating which was debited to "Political."
(c) Length of boundaries of forests disafforested.
(d) Cost of preliminary demarcation.
(e) Cost of clearing compartment and coupe lines.
(f) Expenditure on demarcating the new district boundary.
(g) Includes cost of boundaries demarcated in the previous year.

## Annual Form No. 69.

*Forest Department, Madras Presidency.*

Progress made in working-plans during 1914–15.

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area as in form No. 65. | Entire cost per square mile of working-plans completed. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | | | |
| *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | | |
| Ganjām .. .. | (*a*) 442 | .. | .. | .. | 197 | .. | 639 | .. | |
| Vizagapatam .. | 145 | .. | 28 | .. | 73 | 68 | 314 | .. | |
| Gōdāvari, Upper .. | 117 | 62 | .. | .. | 603 | .. | 782 | .. | |
| Do. Lower .. | 24 | .. | 380 | .. | .. | 75 | 479 | .. | |
| Kistna .. .. | (*b*) 149 | .. | (*b*) 63 | .. | .. | (*b*) 59 | 271 | .. | |
| Kurnool, East .. | .. | .. | .. | 1,000 | .. | .. | 1,000 | .. | |
| Do. South .. | 686 | .. | 80 | .. | .. | .. | 766 | .. | |
| Do. West .. | 469 | .. | .. | .. | .. | 398 | 867 | .. | |
| Total .. | 2,032 | 62 | 551 | 1,000 | 873 | 600 | 5,118 | .. | |
| *Central Circle.* | | | | | | | | | |
| Bellary .. .. | .. | .. | .. | .. | 632 | .. | 682 | .. | |
| Anantapur .. | 426 | .. | .. | .. | 327 | .. | 753 | .. | |
| Guntūr .. .. | 8 | .. | 164 | .. | 642 | .. | 814 | .. | |
| Cuddapah, West .. | (*c*) 89 | .. | .. | 69 | 626 | .. | 784 | .. | |
| Do. East .. | 103 | 56 | .. | 38 | 887 | .. | 1,084 | .. | |
| Nellore .. .. | 58 | 130 | .. | 13 | 528 | .. | 729 | .. | |
| Chingleput .. | 209 | .. | .. | .. | . | .. | 209 | .. | |
| Chittoor .. .. | 791 | . | .. | .. | 47 | .. | 838 | .. | |
| Total .. | 1,634 | 186 | 164 | 120 | 3,739 | .. | 5,943 | .. | |
| *Southern Circle.* | | | | | | | | | |
| Vellore, North | 487 + 1 (*d*) + 3 (*e*) | .. | .. | .. | (*d*) | .. | 491 | .. | |
| Do. South | 591 + 52 (*f*) − 3 (*g*) | 60 | 12 | .. | .. | .. | 712 | .. | |
| Arcot, South .. | 155 | .. | 122 | .. | 17 | 42 | (*g*) 336 | .. | |
| Salem, North .. | 161 | .. | 677 | .. | .. | .. | 838 | .. | |
| Do. South .. | 452 | 17 | 110 | .. | 18 | 2 | 599 | .. | |
| Trichinopoly *cum* Tanjore. | 205 (*h*) — 1 | .. | 39 | .. | (*i*) 120 | 1 | 364 | .. | |
| Madura .. .. | 356 | .. | .. | .. | (*j*) 301 | . | 657 | .. | |
| Tinnevelly *cum* Ramnad. | 246 | .. | .. | .. | 9 | 174 | 429 | .. | |
| Total .. | 2,705 | 77 | 960 | .. | 465 | 219 | 4,426 | .. | |

(*a*) Working-plan for 20 square miles of Mohiri hills was revised during 1914–15.

(*b*) Excludes the area of certain reserves disafforested during the year.

(*c*) Reduction due to cancellation of working plans.

(*d*) Of the 2 square miles shown in column 6 last year 1 square mile was disafforested and 1 square mile transferred to Kurun 2 in rounding off figures.

(*e*) Represents transfer from South to North Vellore.

(*f*) Transferred from column 6 of last year as this area of sandalwood plan under revision is covered by working-plan for other produce.

(*g*) Difference of 1 square mile due to disafforestation; alterations in other columns are revised figures based on classification of forests.

(*h*) Omitted to be deducted in the last year on account of area disafforested.

(*i*) Two square miles added during the year and 2 square miles transferred from column 7.

(*j*) Difference due to recomputation of areas by Special Deputy Collector and disafforestation.

## Progress made in working-plans during 1914–15—*cont.*

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area, as in form No. 55. | Entire cost per square mile of working-plans completed. |
|---|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | | |
| | | | | *Reserved forests.* | | | | |
| *Western Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | |
| South Canara .. .. | 589 | .. | 2 | 49 | 158 | .. | 798 | .. |
| Malabar, North .. .. | 178 | .. | 53 | .. | 32 | .. | 263 | .. |
| Do. South .. .. | 7 | .. | .. | .. | 95 | 37 | 139 | .. |
| The Nilgiris .. .. | 103 | (a) 4 | .. | .. | 368 | .. | 475 | .. |
| Kollegal .. .. .. | 53 | .. | 22 | .. | 160 | 495 | 730 | .. |
| Coimbatore, North .. | 289 | .. | .. | .. | 633 | .. | 922 | .. |
| Do. Central .. | 220 | .. | .. | .. | 54 | 79 | 353 | .. |
| Do. South .. | 75 | .. | .. | .. | 35 | 317 | 427 | .. |
| Total .. | 1,514 | 4 | 77 | 49 | 1,535 | 928 | 4,107 | .. |
| | | | | *Reserved lands.* | | | | |
| South Canara .. .. | .. | .. | .. | .. | * | .. | * | .. |
| The Nilgiris .. .. | .. | .. | .. | .. | 1 | 6 | 7 | .. |
| Kollegal .. .. .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| Coimbatore, North .. | .. | .. | .. | .. | * | .. | * | .. |
| Do. Central .. | .. | .. | .. | .. | 10 | .. | 10 | .. |
| Do. South .. | .. | .. | .. | .. | * | .. | * | .. |
| Total .. | .. | .. | .. | .. | 11 | 7 | 18 | .. |
| | | | | *Leased forests.* | | | | |
| Malabar, South .. .. | 24 | .. | .. | .. | .. | .. | 24 | .. |
| The Nilgiris .. .. | 76 | .. | .. | .. | .. | .. | 76 | .. |
| Coimbatore, South .. | .. | .. | .. | .. | 27 | .. | 27 | .. |
| Total .. | 100 | .. | .. | .. | 27 | .. | 127 | .. |
| Grand total .. | 1,614 | 4 | 77 | 49 | 1,573 | 935 | 4,252 | .. |
| Grand total, Presidency. | 7,985 | 329 | 1,752 | 1,169 | 6,650 | 1,754 | 19,639 | .. |

* Less than one square mile.

(*a*) The difference between this and the area shown in column 4 of last year's return is due to adoption of correct area.

## ANNUAL FORM No. 70.

*Forest Department, Madras Presidency.*

COMMUNICATIONS and Buildings, 1914–15.

| District. | Roads (including bridle-paths and culverts). | | | | Buildings. | | Other works. | |
|---|---|---|---|---|---|---|---|---|
| | New works. | | Repairs. | | Cost of new works. | Cost of repairs. | Cost of new works. | Cost of repairs. |
| | Length. | Cost. | Length. | Cost. | | | | |
| *Northern Circle.* | M. F. CH. | RS. | M. F. CH. | RS. | RS. | RS. | RS. | RS. |
| Direction .. .. | .. .. | .. | .. | .. | (*b*) 19 | .. | .. | .. |
| Ganjam .. .. | 8 6 0 | 3,771 | 50 4 0 | 590<br>(*a*) 595 | (*d*) 1,968 | (*e*) 3,098<br>(*a*) 1,710 | 327 | 1 |
| Vizagapatam .. | .. | .. | 12 5 0 | 121 | 164 | 773<br>(*a*) 597 | 26 | 19 |
| Godavari, Upper .. | 104 7 9/10 0 | 2,601 | 48 2 0 | 252 | 1,037 | 4,055 | 871 | .. |
| Do. Lower .. | 11 0 0 | 397 | 82 0 0 | 2,404 | 2,700 | 2,075<br>(*a*) 694 | 45 | 41 |
| Kistna .. .. | 10 4 0 | 2,277 | 11 6 0 | 183 | 161 | 471 | .. | 151 |
| Kurnool, East .. | 60 0 0 | 2,542 | 187 0 0 | 7,962 | 3,900 | 785<br>(*a*) 812 | 556 | 381 |
| Do. South .. | 11 4 7/10 0 | 729 | 50 2 0 | 7,215 | 1,943 | 1,148 | 139 | 371 |
| Do. West ... | 13 6½ 0 | 320 | 30 3 0 | 374 | 1,337 | 1,047<br>(*a*) 424 | 168 | .. |
| Total .. | 215 5 1/10 | 12,637 | 472 6 0 | 19,696 | 13,229 | 17,987 | 2,132 | 964 |
| *Central Circle.* | | | | | | | | |
| Bellary .. .. | .. | .. | 14 4 7½ | 795 | 506 | 1,160 | 40 | 119 |
| | | | Add cost of establishment. | | | 8 | | |
| Anantapur .. .. | 0 1 0 | 65 | 15 7 0 | 896 | 4,318 | 1,005 | 869 | 411 |
| | Add cost of establishment | | | 318 | .. | 915 | | |
| | | | | | | * + 3 | | |
| Guntur .. .. | .. | .. | 4 0 0 | 39 | 705 | 402 | .. | 76 |
| | | | Add cost of establishment. | | | * + 854 | | |
| Cuddapah, West .. | .. | .. | 10 0 0 | 308 | 1,599 | 488 | .. | .. |
| | | | Add cost of establishment | | | 663 | | |
| | | | | | | * — 1 | | |
| Do. East .. | 51 3 5½ | 5,899 | 79 4 3 | 1,947 | 12,268 | 682 | 54 | 253 |
| | | | | * — 92 | .. | * — 1 | | |
| | | | Add cost of establishment. | | | 432 | | |
| Nellore .. .. | 19 6 0 | 1,663 | .. | .. | 2,162 | 658 | 454 | 1 |
| | | * + 6 | | | | * + 584 | * — 42 | |
| Chingleput .. .. | .. | .. | 13 4 0 | 1,272 | 939 | 930 | .. | 54 |
| | | | | | | * — 1 | | |
| Chittoor .. .. | 13 2 6 | 2,348 | 19 4 0 | 211 | 325 | 602 | 350 | 35 |
| | | | | | | * — 1 | | + 1 |
| | | | Add cost of establishment. | | | 1,306 | | |
| Total .. | 84 5 1¼ | 9 981 | 157 0 ½ | 5,689 | 22,822 | 10,688 | 1,725 | 950 |
| *Southern Circle.* | | | | | | | | |
| Vellore, North .. | 5 0 0 | 1,123 | 36 0 0 | 2,494 | 2,549 | 620<br>+ (*c*) 222 | 45 | 122 |
| Do. South .. | 4 0 0 | 622 | 35 0 0 | 3,518 | 2,463 | 1,782<br>+ (*c*) 548 | 460 | 66 |
| Arcot, South .. .. | 7 0 0 | 429 | .. | .. | 1,333 | 211<br>+ (*c*) 276 | 80 | .. |
| Salem, North .. | 8 0 0 | 992 | 124 0 0 | 1,894 | 4,369 | 932<br>+ (*c*) 217 | 414 | 298 |
| Do. South .. | 22 0 0 | 2,961 | 29 0 0 | 2,371 | 7,359 | 736<br>+ (*c*) 585 | 460 | 45 |
| Trichinopoly .. | .. | .. | 124 0 0 | 2,792 | 4,325 | 816<br>+ (*c*) 663 | .. | 80 |
| Madura .. .. | 3 0 0 | 106 | 145 0 0 | 8,258 | 3,941 | 1,114<br>+ (*c*) 1,061 | 363 | .. |
| Tinnevelly .. .. | .. | .. | 93 0 0 | 2,353 | 5,638 | 1,318 | 437 | 445 |
| Total .. | 49 0 0 | 6,233 | 586 0 0 | 23,680 | 32,477 | 11,100 | 2,759 | 1,056 |

* Variations as per audited figures.

(*a*) Establishment charges. (*b*) Wrongly adjusted to buildings. (*c*) Represents pay of establishment.
(*d*) Excludes Rs. 325 spent in building a combined range office and quarters in the Parlakimedi Maliahs.
(*e*) Excludes Rs. 63 spent on repairs in the Parlakimedi Maliahs.

## Communications and Buildings, 1914-15—*cont*

| District. | Roads (including bridle-paths and culverts). | | | | Buildings. | | Other works. | |
|---|---|---|---|---|---|---|---|---|
| | New works. | | Repairs. | | Cost of new works. | Cost of repairs. | Cost of new works. | Cost of repairs. |
| | Length. | Cost. | Length. | Cost. | | | | |
| *Western Circle.* | M. F. | Rs. | M. F. | Rs. | Rs. | Rs. | Rs. | Rs. |
| South Canara .. .. | 8 6 | 1,563 | 20 6 | 1,342 | 4,315 | 263<br>* 200 | 657 | 16 |
| Malabar, North .. .. | 20 6 | 1,685 | 90 1 | 3,631 | 2,088 | 3,352<br>* 562 | 1,756 | 440 |
| Do. South .. .. | 6 0 | 407 | 74 1 | 3,120 | 5,216 | 1,436 | 1,089 | 152 |
| The Nilgiris .. .. | 13 0 | 7,880 | 48 4 | 2,100 | 914 | 1,357 | 820 | 15 |
| Kollegal .. .. .. | 26 4 | 1,652 | 37 0 | 1,387<br>* 192 | 1,684 | 499<br>* 338 | 1,072 | .. |
| Coimbatore, North .. | 9 0 | 7,411 | 43 0 | 3,394 | 9,483 | 296<br>* 474 | 1,023 | 880 |
| Do. Central . | (a) 6 0 | 92 | 38 0 | 2,865 | 2,344 | 600<br>* 38<br>† — 25 | .. | 134 |
| Do. South .. | 8 5 | 4,465 | 27 6 | 3,829<br>* 288 | 4,755 | 980<br>* 345 | 30 | 97 |
| Direction .. .. .. | .. | .. | .. | .. | .. | 2 | .. | .. |
| Total .. | 98 5 | 25,155 | 379 2 | 22,148 | 30,799 | 10,667 | 6,447 | 1,734 |
| Grand total, Presidency. | 448 | 54,006 | 1,595 | 71,213 | 99,327 | 50,442 | 13,063 | 4,704 |

* Cost of establishment. † Cash recovery of service payments.

(a) Length of a new road traced.

ANNUAL

*Forest Department,*

REGISTER of Breaches of

| District. | | Cases pending from 1913–14. | New cases of the year. | | | | | Total cases. |
|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | |
| (1) | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | NORTHERN |
| Ganjām .. .. | A .. .. | (a) 10 | 1 | 48 | 5 | 1 | 55 | 65 |
| | B .. .. | (a) 67 | .. | 335 | 37 | 2 | 374 | 441 |
| | C .. .. | .. | 92 | 30 | .. | .. | 122 | .. |
| | Total .. | (b) 77 | (c) 93 | (d) 413 | (e) 42 | (f) 3 | (g) 551 | (h) 606 |
| Vizagapatam .. | A .. .. | (a) 12 | 2 | 57 | 4 | 14 | 77 | 89 |
| | B .. .. | (a) 33 | .. | 207 | 47 | 19 | 273 | 306 |
| | C .. .. | .. | 24 | 1 | .. | .. | 25 | .. |
| | Total .. | 45 | 26 | 265 | 51 | 33 | 375 | 395 |
| Gōdāvari, Upper. | A .. .. | .. | .. | .. | .. | .. | . | .. |
| | B .. .. | 22 | .. | 53 | 8 | 11 | 72 | 94 |
| | C .. .. | .. | 30 | .. | .. | .. | 30 | .. |
| | Total .. | 22 | 30 | 53 | 8 | 11 | 102 | 94 |
| Gōdāvari, Lower. | A .. .. | (a) 34 | 2 | 33 | 11 | 7 | 53 | 87 |
| | B .. .. | (a) 69 | 4 | 152 | 58 | 46 | 260 | 329 |
| | C .. .. | .. | .. | 1 | .. | .. | 1 | .. |
| | Total .. | 103 | 6 | 186 | 69 | 53 | 314 | 416 |
| Kistna .. .. | A .. .. | (a) 22 | 2 | 36 | 51 | 3 | 92 | 114 |
| | B .. .. | (a) 52 | .. | 186 | 100 | 6 | 292 | 344 |
| | C .. .. | .. | .. | 8 | 16 | .. | 24 | .. |
| | Total .. | 74 | 2 | 230 | 167 | 9 | 408 | 458 |
| Kurnool, East .. | A .. .. | 23 | .. | 15 | 24 | 5 | 44 | 67 |
| | B .. .. | 46 | .. | 213 | 161 | 10 | 384 | 430 |
| | C .. .. | .. | .. | 17 | 1 | .. | 18 | .. |
| | Total .. | 69 | .. | 245 | 186 | 15 | 446 | 497 |
| Kurnool, South .. | A .. .. | (a) 61 | 1 | 115 | 37 | 16 | 169 | 230 |
| | B .. .. | (a) 37 | 1 | 234 | 121 | 22 | 378 | 415 |
| | C .. .. | .. | 42 | 71 | 7 | 2 | 122 | .. |
| | Total .. | 98 | 44 | 420 | 165 | 40 | 669 | 645 |

A = Cases taken into Court.
B = Cases compounded by the District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

(a) The variations between the closing balances of 1913–14 and the opening balances of 1914–15 are due to transfer of cases between A and B.
(b) Excludes 57 cases belonging to the Parlakimedi Maliahs.
(c) Do. 3 do.
(d) Do. 221 do.
(e) Do. 11 do.
(f) Do. 7 do.
(g) Do. 242 do.
(h) Do. 299 do.

FORM No. 71.

*Madras Presidency.*

Forest Rules during 1914–15.

| Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|
| Convictions. | | Acquittals. | | Total. | | |
| Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| CIRCLE. | | | | | | |
| 37 | 137 | 10 | 32 | 47 | 169 | 18 |
| .. | .. | 303 | 1,165 | 303 | 1,165 | 63 |
| .. | .. | .. | .. | * 75 | 1,281 | |
| .. | .. | .. | .. | .. | .. | .. |
| (i) 37 | (j) 137 | (k) 313 | (l) 1,197 | (m) 350 | (n) 1,334 | (o) 81 |
| | | | | * 75 | 1,281 | |
| 66 | 208 | 11 | 37 | 77 | 245 | 9 |
| | | | | * 3 | 2 | |
| .. | .. | 231 | 438 | 231 | 438 | 49 |
| .. | .. | .. | .. | * 26 | 26 | |
| .. | .. | .. | .. | .. | .. | .. |
| 66 | 208 | 242 | 475 | 308 | 683 | 58 |
| | | | | * 29 | 28 | |
| .. | .. | .. | .. | .. | .. | .. |
| .. | .. | 62 | 141 | 62 | 141 | 12 |
| .. | .. | .. | .. | * 20 | 62 | |
| .. | .. | .. | .. | .. | .. | .. |
| .. | .. | 62 | 141 | 62 | 141 | 12 |
| | | | | * 20 | 62 | |
| 56 | 163 | 12 | 34 | 68 | 197 | 19 |
| .. | .. | 244 | 546 | 244 | 546 | 50 |
| .. | .. | .. | .. | * 35 | 101 | |
| .. | .. | .. | .. | .. | .. | .. |
| 56 | 163 | 256 | 580 | 312 | 743 | 69 |
| | | | | * 35 | 101 | |
| 94 | 263 | 6 | 17 | 100 | 280 | 14 |
| .. | .. | 221 | 425 | 221 | 425 | 66 |
| .. | .. | .. | .. | * 57 | 198 | |
| .. | .. | .. | .. | .. | .. | .. |
| 94 | 263 | 227 | 442 | 321 | 705 | 80 |
| | | | | * 57 | 198 | |
| 46 | 193 | 12 | 27 | 58 | 220 | 9 |
| .. | .. | 336 | 859 | 336 | 859 | 72 |
| .. | .. | .. | .. | * 22 | 69 | |
| .. | .. | .. | .. | .. | .. | .. |
| 46 | 193 | 348 | 886 | 394 | 1,079 | 81 |
| | | | | * 22 | 69 | |
| 196 | 770 | 5 | 8 | 201 | 778 | 29 |
| .. | .. | 312 | 875 | 312 | 875 | 31 |
| | | | | * 70 | 233 | |
| | | | | (p) 2 | | |
| .. | .. | .. | .. | .. | .. | .. |
| 196 | 770 | 317 | 883 | 513 | 1,653 | 60 |
| | | | | * 70 | 233 | |
| | | | | (p) 2 | | |

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

(i) Excludes 204 cases belonging to the Parlākimedi Maliahs, of which 137 cases were compounded by the Special Forest Officer and 67 cases ended in conviction in the Courts.

(j) Excludes 349 persons concerned in the 204 cases referred to in the Parlākimedi Maliahs.

(k) Excludes 19 cases belonging to the Parlakimedi Maliahs, of which 1 case was acquitted by the Court and 18 cases were withdrawn by the Special Forest Officer.

(l) Excludes 31 persons concerned in 19 cases belonging to the Parlākimedi Maliahs.

(m) Excludes 223 cases belonging to the Parlakimedi Maliahs.

(n) Do. 380 persons concerned in 223 cases belonging to the Parlakimedi Maliahs.

(o) Do. 76 cases belonging to the Parlākimedi Maliahs.

(p) Cases transferred to West Kurnool and Cuddapah.

Register of Breaches of

| District. | | Cases pending from 1913-14. | New cases of the year. | | | | | Total cases. |
|---|---|---|---|---|---|---|---|---|
| | | | Injury to forests by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | |
| (1) | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | NORTHERN |
| Kurnool, West .. | A .. .. | (a) 90 | .. | 158 | 62 | 17 | 237 | 327 |
| | B .. .. | (a) 96 | .. | 432 | 174 | 16 | 622 | 718 |
| | C .. .. | .. | 101 | 55 | 10 | 1 | 167 | .. |
| | Total .. | 186 | 101 | 645 | 246 | 34 | 1,026 | 1,045 |
| Total .. | A .. .. | 252 | 8 | 462 | 194 | 63 | 727 | 979 |
| | B .. .. | 422 | 5 | 1,812 | 706 | 132 | 2,655 | 3,077 |
| | C .. .. | .. | 289 | 183 | 34 | 3 | 509 | .. |
| | Grand Total .. | 674 | 302 | 2,457 | 934 | 198 | 3,891 | 4,056 |
| | | | | | | | | CENTRAL |
| Bellary .. .. | A .. .. | 9 | .. | 71 | 18 | 18 | 102 | 111 |
| | B .. .. | 210 | 1 | 365 | 502 | 47 | 915 | 1,125 |
| | C .. .. | .. | .. | 1 | 30 | .. | 31 | .. |
| | Total .. | 219 | 1 | 437 | 550 | 60 | 1,048 | 1,236 |
| Anantapur .. | A .. .. | 138 | .. | 239 | 62 | 14 | 315 | 453 |
| | B .. .. | .. | .. | 430 | 150 | 10 | 590 | 590 |
| | C .. .. | .. | 71 | 50 | 263 | .. | 384 | .. |
| | Total .. | 138 | 71 | 719 | 475 | 24 | 1,289 | 1,043 |
| Guntur .. .. | A .. .. | 244 | .. | 133 | 199 | 16 | 348 | 592 |
| | B .. .. | 111 | .. | 657 | 662 | 44 | 1,363 | 1,474 |
| | C .. .. | .. | .. | 58 | .. | 2 | 60 | .. |
| | Total .. | 355 | .. | 848 | 861 | 62 | 1,771 | 2,066 |
| Cuddapah, West .. | A .. .. | 47 | 1 | 254 | 123 | 19 | 397 | 444 |
| | B .. .. | 216 | 1 | 339 | 114 | 32 | 486 | 702 |
| | C .. .. | .. | .. | 2 | 2 | .. | 4 | .. |
| | Total .. | 263 | 2 | 595 | 239 | 51 | 887 | 1,146 |
| Cuddapah, East.. | A .. .. | (a) 62 | 1 | 123 | 39 | 5 | 168 | 230 |
| | B .. .. | (a) 68 | .. | 529 | 171 | 8 | 708 | 776 |
| | C .. .. | .. | .. | 3 | .. | .. | 3 | .. |
| | Total .. | 130 | 1 | 655 | 210 | 13 | 879 | 1,006 |
| Nellore .. .. | A .. .. | (a) 73 | .. | 171 | 273 | 20 | 464 | 537 |
| | B .. .. | (a) 240 | 1 | 562 | 634 | 14 | 1,211 | 1,451 |
| | C .. .. | .. | 9 | 147 | .. | .. | 156 | .. |
| | Total .. | 313 | 10 | 880 | 907 | 34 | 1,831 | 1,988 |

A = Cases taken into Court.
B = Cases compounded by District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

(a) Variations between the closing balance of 1913-14 and the opening balance of 1914-15 are due to transfer of cases between A and B.

## Forest Rules during 1914–15—*cont.*

| Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|
| Convictions. | | Acquittals. | | Total. | | |
| Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| **Circle—*cont.*** | | | | | | |
| 263 | 733 | 32 | 188 | 295 | 921 | 31 |
| | | | | * 1 | 5 | |
| .. | .. | 621 | 1,527 | 621 | 1,527 | 84 |
| | | | | * 13 | 22 | |
| .. | .. | .. | .. | .. | .. | .. |
| 263 | 733 | 653 | 1,715 | 916 | 2,448 | 115 |
| | | | | * 14 | 27 | |
| 758 | 2,467 | 88 | 343 | 846 | 2,810 | 129 |
| | | | | * 4 | 7 | |
| .. | .. | 2,330 | 5,976 | 2,330 | 5,976 | 427 |
| | | | | * 318 | 1,992 | |
| | | | | (*b*) 2 | | |
| .. | .. | .. | .. | .. | .. | .. |
| 758 | 2,467 | 2,418 | 6,319 | 3,176 | 8,786 | 556 |
| | | | | * 322 | 1,999 | |
| | | | | (*b*) 2 | | |
| **Circle.** | | | | | | |
| 85 | 194 | 17 | 66 | 102 | 260 | 9 |
| 924 | 2,175 | .. | .. | 924 | 2,175 | 152 |
| | | | | * 49 | 106 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,009 | 2,369 | 17 | 66 | 1,026 | 2,435 | 161 |
| | | | | * 49 | 106 | |
| 221 | 506 | 103 | 269 | 324 | 775 | 129 |
| 502 | 1,073 | .. | .. | 502 | 1,073 | 88 |
| .. | .. | .. | .. | .. | .. | .. |
| 723 | 1,579 | 103 | 269 | 826 | 1,848 | 217 |
| 399 | 1,587 | 5 | 30 | 404 | 1,617 | 188 |
| 1,068 | 3,256 | .. | .. | 1,068 | 3,256 | 350 |
| | | | | * 56 | 138 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,467 | 4,843 | 5 | 30 | 1,472 | 4,873 | 538 |
| | | | | * 56 | 138 | |
| 289 | 955 | 13 | 40 | 302 | 995 | 142 |
| 539 | 1,105 | .. | .. | 539 | 1,105 | 107 |
| | | | | * 56 | 183 | |
| .. | .. | .. | .. | .. | .. | .. |
| 828 | 2,060 | 13 | 40 | 841 | 2,100 | 249 |
| | | | | * 56 | 183 | |
| 210 | 474 | 15 | 61 | 225 | 535 | 5 |
| 582 | 1,381 | .. | .. | 582 | 1,381 | 136 |
| | | | | * 58 | 151 | |
| .. | .. | .. | .. | .. | .. | .. |
| 792 | 1,855 | 15 | 61 | 807 | 1,916 | 141 |
| | | | | * 58 | 151 | |
| 401 | 1,414 | 42 | 181 | 443 | 1,595 | 94 |
| 1,115 | 2,245 | .. | .. | 1,115 | 2,245 | 296 |
| | | | | * 40 | 186 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,516 | 3,659 | 42 | 181 | 1,558 | 3,840 | 390 |
| | | | | * 40 | 186 | |

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.
(*b*) Cases transferred to West Kurnool to Cuddapah.

Register of Breaches of

| District. | | Cases pending from 1913–14. | New cases of the year. | | | | | Total cases. |
|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | |
| (1) | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | CENTRAL |
| Chingleput .. | A .. .. | 16 | .. | 161 | 93 | 13 | 267 | 283 |
| | B .. .. | 127 | .. | 830 | 623 | 31 | 1,484 | 1,611 |
| | C .. .. | .. | 2 | 5 | 2 | .. | 9 | .. |
| | Total .. | 143 | 2 | 996 | 718 | 44 | 1,760 | 1,894 |
| Chittoor .. | A .. .. | (a) 79 | .. | 99 | 90 | 21 | 210 | 289 |
| | B .. .. | (a) 102 | .. | 778 | 479 | 23 | 1,280 | 1,382 |
| | C .. .. | .. | 41 | .. | .. | .. | 41 | .. |
| | Total .. | 181 | 41 | 827 | 569 | 44 | 1,481 | 1,621 |
| Total .. | A .. .. | (a) 668 | 2 | 1,251 | 897 | 121 | 2,271 | 2,939 |
| | B .. .. | (a) 1,074 | 3 | 4,440 | 3,335 | 209 | 7,987 | 9,061 |
| | C .. .. | .. | 123 | 266 | 297 | 2 | 688 | . |
| | Grand Total .. | 1,742 | 128 | 5,957 | 4,529 | 332 | 10,946 | 12,000 |
| | | | | | | | | SOUTHERN |
| North Vellore. | A .. .. | 85 | 1 | 90 | 84 | 14 | 189 | 274 |
| | B .. .. | 227 | .. | 1,040 | 435 | 24 | 1,499 | 1,726 |
| | C .. .. | .. | 34 | .. | 14 | .. | 48 | .. |
| | Total .. | 312 | 35 | 1,130 | 533 | 38 | 1,736 | 2,000 |
| South Vellore. | A .. .. | 38 + 62 | .. | 264 | 78 | 22 | 364 | 464 |
| | B .. .. | 252 — 62 | .. | 813 | 336 | 216 | 1,365 | 1,555 |
| | C .. .. | .. | 42 | 29 | .. | 37 | 108 | .. |
| | Total .. | 290 | 42 | 1,106 | 414 | 275 | 1,837 | 2,019 |
| South Arcot .. | A .. .. | 81 + 187, | .. | 576 | 323 | 20 | 919 | 1,187 |
| | B .. .. | 499 — 187 | .. | 1,215 | 579 | 10 | 1,804 | 2,116 |
| | C .. .. | .. | 7 | 87 | .. | .. | 94 | .. |
| | Total .. | 580 | 7 | 1,878 | 902 | 30 | 2,817 | 3,303 |
| North Salem .. | A .. .. | 36 + 46 | 1 | 263 | 53 | 11 | 328 | 410 |
| | B .. .. | 203 — 46 | .. | 874 | 248 | 50 | 1,172 | 1,329 |
| | C .. .. | .. | 42 | 4 | .. | .. | 46 | .. |
| | Total .. | 239 | 43 | 1,141 | 301 | 61 | 1,546 | 1,739 |
| South Salem .. | A .. .. | 66 | .. | 209 | 47 | 19 | 275 | 341 |
| | B .. .. | 144 | . | 445 | 167 | 83 | 695 | 839 |
| | C .. .. | .. | 23 | 37 | .. | .. | 60 | .. |
| | Total .. | 210 | 23 | 691 | 214 | 102 | 1,030 | 1,180 |

A = Cases taken to Court.
B = Cases compounded by District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

*Note* (*Southern Circle*).—Alterations in column 2 represent transfer between A and B.

(*a*) Variations between the closing balance of 1913–14 and the opening balance of 1914–15 are due to transfer of cases between the heads A and B.

## Forest Rules during 1914-15—*cont.*

| Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|
| Convictions. | | Acquittals. | | Total. | | |
| Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| **CIRCLE—*cont.*** | | | | | | |
| 259 | 451 | 12 | 18 | 271 | 469 | 12 |
| 1,406 | 1,749 | .. | .. | 1,468 | 1,749 | 143 |
| | | | | * 62 | 147 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,665 | 2,200 | 12 | 18 | 1,677 | 2,218 | 155 |
| | | | | * 62 | 147 | |
| 249 | 620 | 19 | 90 | 268 | 710 | 21 |
| 1,072 | 1,606 | .. | .. | 1,072 | 1,606 | 146 |
| | | | | * 114 | 270 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,321 | 2,226 | 19 | 90 | 1,340 | 2,316 | 167 |
| | | | | * 114 | 270 | |
| 2,113 | 6,201 | 226 | 755 | 2,339 | 6,956 | 600 |
| 7,208 | 14,590 | .. | .. | 7,208 | 14,590 | 1,418 |
| | | | | * 435 | 1,181 | |
| .. | .. | .. | .. | .. | .. | .. |
| 9,321 | 20,791 | 226 | 755 | 9,547 | 21,546 | 2,018 |
| | | | | * 435 | 1,181 | |
| **CIRCLE.** | | | | | | |
| 164 | 386 | 22 | 51 | 186 | 437 | 74 |
| | | | | * 14 | 33 | |
| 1,376 | 2,807 | .. | .. | 1,376 | 2,807 | 226 |
| | | | | * 124 | 172 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,540 | 3,193 | 22 | 51 | 1,562 | 3,244 | 300 |
| | | | | * 138 | 205 | |
| 329 | 912 | 16 | 44 | 345 | 956 | 118 |
| | | | | * 1 | 2 | |
| 997 | 2,023 | .. | .. | 997 | 2,023 | 238 |
| | | | | * 320 | 509 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,326 | 2,935 | 16 | 44 | 1,342 | 2,979 | 356 |
| | | | | * 321 | 511 | |
| 970 | 2,413 | 18 | 45 | 988 | 2,458 | 75 |
| | | | | * 124 | 338 | |
| 1,622 | 2,914 | .. | .. | 1,622 | 2,914 | 440 |
| | | | | * 54 | 130 | |
| .. | .. | .. | .. | .. | .. | .. |
| 2,592 | 5,327 | 18 | 45 | 2,610 | 5,372 | 515 |
| | | | | * 178 | 468 | |
| 385 | 779 | 6 | 14 | 391 | 793 | 19 |
| 964 | 1,611 | .. | .. | 964 | 1,611 | 270 |
| | | | | * 95 | 197 | |
| .. | .. | .. | .. | .. | .. | .. |
| 1,349 | 2,390 | 6 | 14 | 1,355 | 2,404 | 289 |
| | | | | * 95 | 197 | |
| 219 | 907 | 10 | 44 | 229 | 951 | 112 |
| 621 | 1,363 | .. | .. | 621 | 1,363 | 171 |
| | | | | * 47 | 156 | |
| .. | .. | .. | .. | .. | .. | .. |
| 840 | 2,270 | 10 | 44 | 850 | 2,314 | 283 |
| | | | | * 47 | 156 | |

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

Register of Breaches of

| District. | | Cases pending from 1913-14. | New cases of the year. Injury to forests by fire. | Un-authorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | Total cases. |
|---|---|---|---|---|---|---|---|---|
| (1) | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | SOUTHERN |
| Trichinopoly .. | A .. .. | 36 + 2 | 1 | 50 | 29 | 7 | 87 | 125 |
| | B .. . | 310 — 2 | .. | 2,019 | 376 | 64 | 2,459 | 2,767 |
| | C .. .. | .. | 9 | 16 | 2 | .. | 27 | .. |
| | Total .. | 346 | 10 | 2,085 | 407 | 71 | 2,573 | 2,892 |
| Madura .. .. | A .. .. | 74 | 1 | 315 | 108 | 31 | 455 | 529 |
| | B .. .. | 564 | .. | 1,050 | 297 | 34 | 1,381 | 1,945 |
| | C .. .. | .. | 62 | 19 | .. | .. | 81 | .. |
| | Total .. | 638 | 63 | 1,384 | 405 | 65 | 1,917 | 2,474 |
| Tinnevelly .. | A .. .. | 22 | 2 | 169 | 56 | 6 | 233 | 255 |
| | B .. .. | 177 | .. | 463 | 159 | 32 | 654 | 831 |
| | C .. .. | .. | 24 | 44 | .. | .. | 68 | .. |
| | Total .. | 199 | 26 | 676 | 215 | 38 | 955 | 1,086 |
| Total, Southern Circle. | A .. .. | 735 | 6 | 1,936 | 778 | 130 | 2,850 | 3,585 |
| | B .. .. | 2,079 | .. | 7,919 | 2,597 | 513 | 11,029 | 13,108 |
| | C .. .. | .. | 243 | 236 | 16 | 37 | 532 | .. |
| | Grand Total .. | 2,814 | 249 | 10,091 | 3,391 | 680 | 14,411 | 16,693 |
| | | | | | | | | WESTERN |
| South Canara .. | A .. .. | (a) 29 | 4 | 109 | 17 | 32 | 162 | 191 |
| | B .. .. | (a) 206 | 49 | 863 | 108 | 129 | 1,149 | 1,355 |
| | C .. .. | .. | 57 | .. | .. | .. | 57 | .. |
| | Total .. | 235 | 110 | 972 | 125 | 161 | 1,368 | 1,546 |
| Malabar, North .. | A .. .. | 1 | .. | .. | .. | 2 | 2 | 3 |
| | B .. .. | .. | 5 | 15 | 3 | 5 | 28 | 26 |
| | C .. .. | .. | 1 | .. | .. | .. | 1 | .. |
| | Total .. | 1 | 6 | 15 | 3 | 7 | 31 | 31 |
| Malabar, South. | A .. .. | 1 | .. | 4 | .. | 2 | 6 | 7 |
| | B .. .. | 1 | .. | 6 | 20 | 15 | 41 | 42 |
| | C .. .. | .. | 2 | 2 | .. | .. | 4 | .. |
| | Total .. | 2 | 2 | 12 | 20 | 17 | 51 | 49 |
| The Nilgiris .. | A .. .. | 7 | 1 | 26 | 23 | 9 | 59 | 66 |
| | B .. .. | 6 | .. | 77 | 112 | 18 | 207 | 213 |
| | C .. .. | .. | 11 | .. | .. | .. | 11 | .. |
| | Total .. | 13 | 12 | 103 | 135 | 27 | 277 | 279 |

A = Cases taken into Court.
B = Cases compounded by District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

(a) Variations between the closing balance of 1913-14 and the opening balance of 1914-15 are due to transfer of cases between A and B.

*Note (Southern Circle).*—Alterations in column 2 represent transfers between A and B.

## Forest Rules during 1914-15 —*cont.*

| Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|
| Convictions. | | Acquittals. | | Total. | | |
| Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| CIRCLE—*cont.* | | | | | | |
| 60 | 163 | 30 | 155 | 90 | 318 | 35 |
| 1,974 | 3,232 | .. | .. | 1,974 | 3,232 | 501 |
| .. | .. | .. | .. | * 292 | 477 | |
| | | | | .. | .. | .. |
| 2,034 | 3,395 | 30 | 155 | 2,064 | 3,550 | 536 |
| | | | | * 292 | 477 | |
| 349 | 1,535 | 52 | 229 | 401 | 1,764 | 128 |
| 1,390 | 3,982 | .. | .. | 1,390 | 3,982 | 446 |
| .. | .. | .. | .. | * 109 | 424 | |
| | | | | .. | .. | .. |
| 1,739 | 5,517 | 52 | 229 | 1,791 | 5,746 | 574 |
| | | | | * 109 | 424 | |
| 236 | 691 | 4 | 7 | 240 | 698 | 15 |
| 713 | 1,711 | .. | .. | 713 | 1,711 | 118 |
| .. | .. | .. | .. | .. | .. | .. |
| 949 | 2,402 | 4 | 7 | 953 | 2,409 | 133 |
| 2,712 | 7,786 | 158 | 589 | 2,870 | 8,375 | 576 |
| | | | | * 139 | 373 | |
| 9,657 | 19,643 | .. | .. | 9,657 | 19,643 | 2,410 |
| .. | .. | .. | .. | * 1,041 | 2,065 | |
| | | | | .. | .. | .. |
| 12,369 | 27,429 | 158 | 589 | 12,527 | 28,018 | 2,986 |
| | | | | * 1,180 | 2,438 | |
| CIRCLE. | | | | | | |
| 154 | 375 | 18 | 31 | 172 | 406 | 19 |
| 982 | 1,994 | .. | .. | 982 | 1,994 | 259 |
| .. | .. | .. | .. | * 114 | 229 | |
| | | | | .. | .. | .. |
| 1,136 | 2,369 | 18 | 31 | 1,154 | 2,400 | 278 |
| | | | | * 114 | 229 | |
| 2 | 4 | .. | .. | 2 | 4 | 1 |
| 15 | 17 | .. | .. | 15 | 17 | 8 |
| .. | .. | .. | .. | * 5 | 16 | |
| | | | | .. | .. | .. |
| 17 | 21 | .. | .. | 17 | 21 | 9 |
| | | | | * 5 | 16 | |
| 3 | 4 | 1 | 2 | 4 | 6 | 2 |
| | | | | * 1 | 2 | |
| 39 | 69 | .. | .. | 39 | 69 | .. |
| | | | | * 3 | 3 | |
| .. | .. | .. | .. | .. | .. | .. |
| 42 | 73 | 1 | 2 | 43 | 75 | 2 |
| | | | | * 4 | 5 | |
| 52 | 146 | 6 | 15 | 58 | 161 | 8 |
| 118 | 280 | .. | .. | 118 | 280 | 44 |
| | | | | * 51 | 106 | |
| .. | .. | .. | .. | .. | .. | .. |
| 170 | 426 | 6 | 15 | 176 | 441 | 52 |
| | | | | * 51 | 106 | |

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

Register of Breaches of

| District. | | Cases pending from 1913-14. | New cases of the year. | | | | | Total cases. |
|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | |
| (1) | | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | | WESTERN |
| Kollegal .. | A .. .. | (a) 28 | .. | 24 | 16 | 2 | 42 | 70 |
| | B .. .. | (a) 33 | .. | 80 | 58 | 2 | 140 | 173 |
| | C .. .. | .. | 15 | 14 | 15 | 2 | 46 | .. |
| | Total .. | 61 | 15 | 118 | 89 | 6 | 228 | 243 |
| Coimbatore, North. | A .. .. | 27 | 4 | 68 | 42 | 5 | 119 | 146 |
| | B .. .. | 37 | .. | 201 | 81 | 12 | 294 | 331 |
| | C .. .. | .. | 23 | .. | .. | .. | 28 | .. |
| | Total .. | 64 | 27 | 269 | 123 | 17 | 436 | 477 |
| Coimbatore, Central. | A .. .. | 30 | 2 | 110 | 41 | 20 | 173 | 203 |
| | B .. .. | 65 | .. | 270 | 68 | 46 | 384 | 449 |
| | C .. .. | .. | 8 | 6 | .. | .. | 14 | .. |
| | Total .. | 95 | 10 | 386 | 109 | 66 | 571 | 652 |
| Coimbatore, South. | A .. .. | 17 | .. | 79 | 13 | 3 | 95 | 112 |
| | B .. .. | 22 | .. | 181 | 24 | 6 | 211 | 233 |
| | C .. .. | .. | 16 | 9 | .. | .. | 25 | .. |
| | Total .. | 39 | 16 | 269 | 37 | 9 | 331 | 345 |
| Grand total | A .. .. | 140 | 11 | 420 | 152 | 75 | 658 | 798 |
| | B .. .. | 370 | 54 | 1,693 | 474 | 233 | 2,454 | 2,824 |
| | C .. .. | .. | 133 | 31 | 15 | 2 | 181 | .. |
| | Total .. | 510 | 198 | 2,144 | 641 | 310 | 3,293 | 3,622 |
| Total | A .. .. | 1,795 | 27 | 4,069 | 2,021 | 389 | 6,506 | 8,301 |
| | B .. .. | 3,945 | 62 | 15,864 | 7,112 | 1,087 | 24,125 | 28,070 |
| | C .. .. | .. | 788 | 716 | 362 | 44 | 1,910 | .. |
| Grand total, Presidency .. | | 5,740 | 877 | 20,649 | 9,495 | 1,520 | 32,541 | 36,371 |

A = Cases taken into Court. B = Cases compounded. C = Cases undetected.

(a) The variations between the closing balance of 1913-14.

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

## Forest Rules during 1914–15—*cont.*

| Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|
| Convictions. | | Acquittals. | | Total. | | |
| Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| CIRCLE—*cont.* | | | | | | |
| 56 | 165 | 8 | 35 | 64 | 200 | 6 |
| 140 | 327 | .. | .. | 140 | 327 | 27 |
| | | | | * 6 | 9 | |
| .. | .. | .. | .. | .. | .. | .. |
| 196 | 492 | 8 | 35 | 204 | 527 | 33 |
| | | | | * 6 | 9 | |
| 103 | 265 | 3 | 13 | 106 | 278 | 40 |
| 241 | 606 | .. | .. | 241 | 606 | 59 |
| | | | | * 31 | 89 | |
| .. | .. | .. | .. | .. | .. | .. |
| 344 | 871 | 3 | 13 | 347 | 884 | 99 |
| | | | | * 31 | 89 | |
| 163 | 487 | 14 | 59 | 177 | 546 | 26 |
| 335 | 730 | .. | .. | 335 | 730 | 82 |
| | | | | * 32 | 71 | |
| .. | .. | .. | .. | .. | .. | .. |
| 498 | 1,217 | 14 | 59 | 512 | 1,276 | 108 |
| | | | | * 32 | 71 | |
| 91 | 328 | 8 | 35 | 99 | 363 | 13 |
| 171 | 461 | .. | .. | 171 | 461 | 46 |
| | | | | * 16 | 32 | |
| .. | .. | .. | .. | .. | .. | .. |
| 262 | 789 | 8 | 35 | 270 | 824 | 59 |
| | | | | * 16 | 32 | |
| 624 | 1,774 | 58 | 190 | 682 | 1,964 | 115 |
| | | | | * 1 | 2 | |
| 2,041 | 4,484 | .. | .. | 2,041 | 4,484 | 525 |
| | | | | * 258 | 555 | |
| .. | .. | .. | .. | .. | .. | .. |
| 2,665 | 6,258 | 58 | 190 | 2,723 | 6,448 | 640 |
| | | | | * 259 | 557 | |
| 6,207 | 18,228 | 530 | 1,877 | 6,737 | 20,105 | 1,420 |
| | | | | * 144 | 382 | |
| .. | .. | 21,236 | 44,693 | 21,236 | 44,693 | 4,780 |
| | | | | * 2,054 | 5,800 | |
| .. | .. | .. | .. | .. | .. | .. |
| 6,207 | 18,228 | 21,766 | 46,570 | 27,973 | 64,798 | 6,200 |
| | | | | * 2,198 | 6,182 | |

## ANNUAL FORM No. 72.

*Forest Department, Madras Presidency.*

AREA of forest tracts protected from fire during 1914–15.

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | | |
| | *Northern Circle.* | ACS. | ACS. | ACS. | ACS. | RS. | |
| Ganjām .. | Special protection .. | 99,464 | 102,537 | 130 | 102,407 | 4,468 | |
| | General do. .. | 38,054 | 38,538 | 1,044 | 37,494 | 1,242 | |
| | Total, Ganjām .. | (*d*)137,518 | (*e*) 141,075 | (*f*) 1,174 | (*g*)139,901 | (*h*) 5,705 | |
| Vizagapatam. | Special protection .. | 67,984 | 68,191 | 3,320 | 64,871 | 1,812 | |
| | General do. .. | 107,216 | 123,302 | 8,831 | 114,471 | 258 | |
| | Total, Vizagapatam .. | 175,200 | 191,493 | 12,151 | 179,342 | 2,070 | |
| Gōdāvari, Upper. | Special protection .. | 379,957 | 532,793 | 63,979 | 468,814 | 6,999 | |
| | General do. .. | .. | .. | .. | .. | .. | |
| | Total, Gōdāvari, Upper.. | 379,957 | 532,793 | 63,979 | 468,814 | 6,999 | |
| Gōdāvari, Lower. | Special protection .. | .. | .. | .. | .. | 4,440 | |
| | General do. .. | 228,723 | 240,870 | 1,331 | 239,539 | .. | |
| | Total, Gōdāvari, Lower.. | 228,723 | 240,870 | 1,331 | 239,539 | 4,440 | |
| Kistna .. | Special protection .. | 58,564 | 60,229 | 33 | 60,196 | 1,246 | |
| | General do. .. | .. | .. | .. | | .. | |
| | Total, Kistna .. | 58,564 | 60,229 | 33 | 60,196 | 1,246 | |
| Kurnool, East. | Special protection .. | 86,813 | 151,235 | 15,144 | 136,091 | 13,185 | |
| | General do. .. | 534,924 | 489,067 | 1,739 | 487,328 | .. | |
| | Total, Kurnool, East .. | 621,737 | 640,302 | 16,883 | 623,419 | 13,185 | |
| Kurnool, South. | Special protection .. | (*a*)171,926 | 334,148 | 78,213 | 255,935 | 13,639 | |
| | General do. .. | (*a*)275,068 | 156,316 | 4,630 | 151,686 | .. | |
| | Total, Kurnool, South .. | 446,994 | 490,464 | 82,843 | 407,621 | 13,639 | |
| Kurnool, West. | Special protection .. | 81,365 | 155,648 | 5,921 | 149,727 | 17,989 | |
| | General do. .. | (*b*) 351,617 | 393,472 | 41,464 | 352,008 | .. | |
| | Total, Kurnool, West .. | 432,982 | 549,120 | 47,385 | 501,735 | 17,989 | |
| Total .. | Special protection .. | 946,073 | 1,404,781 | 166,740 | 1,238,041 | 63,773 | |
| | General do. .. | 1,535,602 | 1,441,565 | 59,039 | 1,382,526 | 1,500 | |
| | Grand total .. | 2,481,675 | 2846,346 | 225,779 | 2,620,567 | 65,273 | |
| | *Central Circle.* | | | | | | |
| Bellary .. | Special protection .. | 50,689 | 95,250 | 4,932 | 90,318 | 6,869 | |
| | General do. .. | 2,274 | 1,069 | 350 | 719 | .. | |
| | Total .. | 52,963 | 96,319 | 5,282 | 91,037 | 6,869 | |
| Anantapur .. | Special protection .. | 379,811 | 420,314 | 9,980 | 410,334 | 7,015 | |
| | General do. .. | .. | 52,460 | 38 | 52,422 | .. | |
| | Total .. | 379,811 | 472,774 | 10,018 | 462,756 | 7,015 | |
| Guntūr .. | Special protection .. | 13,084 | 13,334 | 50 | 13,284 | 15 | |
| | General do. .. | 20,940 | 21,203 | 2 | 21,201 | (*c*) + 5<br>60 | |
| | Total .. | 34,024 | 34,537 | 52 | 34,485 | 80 | |
| Cuddapah, West. | Special protection .. | 238,555 | 254,959 | 55,238 | 199,701 | 3,207 | |
| | General do. .. | 85,074 | 87,697 | 4,569 | 83,128 | (*c*) + 281<br>630 | |
| | Total .. | 323,629 | 342,656 | 59,807 | 282,829 | 4,118 | |

(*a*) The differences between the closing balances of last year and opening balance of the current year are due to transfer of 10,919 acres from special to general protection.
(*b*) Last year's figure given in column 7 is incorrect and the correct one is now adopted.
(*c*) Added or deducted as per audited figure.
(*d*) Excludes 71,006 acres belonging to the Parlakimedi Maliahs.
(*e*) Do. 91,014 do. do.
(*f*) Do. 1,612 do. do.
(*g*) Do. 89,402 do. do.
(*h*) Do. Rs. 437 spent on fire protection operations in the Parlakimedi Malaiahs.

Area of forest tracts protected from fire during 1914-15—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. | Remarks. |
|---|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | | |
| | *Central Circle*—cont. | ACS. | ACS. | ACS. | ACS. | RS. | |
| Cuddapah, East. | Special protection .. | 273,653 | 98,981 | 5,652 | 93,329 | 3,702 | |
| | General do. .. | 123,758 | 330,654 | 70,196 | 260,458 | .. | |
| | Total .. | 397,411 | 429,635 | 75,848 | 353,787 | 3,702 | |
| Nellore .. | Special protection .. | 128,698 | 129,124 | 617 | 128,507 | 1,605 | |
| | General do. .. | .. | .. | .. | .. | .. | |
| | Total .. | 128,698 | 129,124 | 617 | 128,507 | 1,605 | |
| Chingleput.. | Special protection .. | 25,649 | 25,857 | 352 | 25,505 | 957 | |
| | General do. .. | 108,122 | 107,607 | 5 | 107,602 | .. | |
| | Total .. | 133,771 | 133,464 | 357 | 133,107 | 957 | |
| Chittoor .. | Special protection .. | 132,012 | 136,837 | 1,022 | 135,815 | 1,724 | |
| | General do. .. | 351,660 | 336,036 | 3,821 | 332,215 | (*a*) — 1 | |
| | Total .. | 483,672 | 472,873 | 4,843 | 468,030 | 1,723 | |
| Total .. | Special protection .. | 1,242,151 | 1,174,636 | 77,843 | 1,096,793 | 25,094 | |
| | General do. .. | 691,828 | 936,726 | 78,981 | 857,745 | (*a*) + 285<br>690 | |
| | Grand Total .. | 1,933,979 | 2,111,362 | 156,824 | 1,954,538 | 26,069 | |
| | *Southern Circle.* | | | | | | |
| Vellore, North. | Special protection .. | 57,334 | 50,922 | 1,058 | 49,864 | 725 | |
| | General do. .. | 255,498 | 279,452 | 1,159 | 278,293 | .. | |
| | Total .. | 312,832 | 330,374 | 2,217 | 328,157 | 725 | |
| Vellore, South. | Special protection .. | 141,545 | 122,587 | 372 | 122,215 | 2,330 | |
| | General do. .. | 308,264 | 322,365 | 1,343 | 321,022 | .. | |
| | Total .. | 449,809 | 444,952 | 1,715 | 443,237 | 2,330 | |
| South Arcot. | Special protection .. | 13,541 | 13,541 | .. | 13,541 | 186 | |
| | General do. .. | 201,962 | 201,281 | 9 | 201,272 | .. | |
| | Total .. | 215,503 | 214,822 | 9 | 214,813 | 186 | |
| Salem, North | Special protection .. | 63,723 | 65,562 | 3,366 | 62,196 | 3,227 | |
| | General do. .. | 459,522 | 471,102 | 1,536 | 469,566 | | |
| | Total .. | 523,245 | 526,664 | 4,902 | 531,762 | 3,227 | |
| Salem, South | Special protection .. | 227,123 | 217,269 | 382 | 216,887 | 2,270 | |
| | General do. .. | 155,166 | 154,412 | 307 | 154,105 | .. | |
| | Total .. | 382,289 | 371,681 | 689 | 370,992 | 2,270 | |
| Trichinopoly. | Special protection .. | 22,184 | 22,199 | 106 | 22,093 | 530 | |
| | General do. .. | 81,616 | 81,626 | (*b*) 30 | 81,596 | 345 | |
| | Total .. | 103,800 | 103,825 | 136 | 103,689 | 875 | |
| Madura .. | Special protection .. | (*c*)168,056 | 127,242 | 1,324 | 125,918 | 4,336 | |
| | General do. .. | (*c*)246,989 | 291,132 | 2,282 | 288,850 | .. | |
| | Total .. | 415,045 | 418,374 | 3,606 | 414,768 | 4,336 | |
| Tinnevelly | Special protection .. | 31,297 | 35,377 | 5,111 | 30,266 | 5,444 | |
| | General do. .. | 202,079 | 206,712 | 2,320 | 204,392 | .. | |
| | Total .. | 233,376 | 242,089 | 7,431 | 234,658 | 5,444 | |
| | Total, Special protection. | 724,803 | 654,699 | 11,719 | 642,980 | 19,048 | |
| | Total, General protection. | 1,911,096 | 2,008,082 | 8,986 | 1,999,096 | 345 | |
| | Grand total (Special and General). | 2,635,899 | 2,662,781 | 20,705 | 2,642,076 | 19,393 | |

(*a*) Added or deducted as per audited figure.
(*b*) Excludes 10 acres burnt in areas not brought under protection.
(*c*) Revised and correct figures furnished by the Collector.

## Area of forest tracts protected from fire during 1914-15—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. | Remarks |
|---|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | | |
| | *Western Circle.* | ACS. | ACS. | ACS. | ACS. | RS. | RS. |
| South Canara. | Special protection .. | 134,604 | 142,561 | 514 | 142,047 | 2,642 | * Fire-tracing Mysore-South Canara boundary. 698 |
| | | | | | * + 729 | | Fire-tracing cart-stands, etc. .. 18 |
| | General do. .. | 869,180 | 368,185 | 1,292 | 366,393 | 1,049 | Cost of previous year disbursed during the year .. 18 |
| | Total .. | 503,784 | 510,746 | 1,806 | 508,940 | 4,420 | Total .. 729 |
| Malabar, North. | Special protection .. | 131,434 | 139,089 | 49 | 139,040 | 7,454 | |
| | General do. .. | .. | .. | .. | .. | .. | |
| | Total .. | 131,434 | 139,089 | 49 | 139,040 | 7,454 | |
| Malabar, South. | Special protection .. | 79,444 | 82,117 | 10 | 82,107 | 2,738 | † Cost of putting out a fire in an unprotected area. |
| | | | | | | † + 15 | |
| | General do. .. | .. | .. | .. | .. | .. | |
| | Total .. | 79,444 | 82,117 | 10 | 82,107 | 2,753 | |
| The Nilgiris. | Special protection .. | 58,472 | 74,530 | 177 | 74,353 | 3,758 | |
| | General do. .. | .. | .. | .. | .. | .. | |
| | Total .. | 58,472 | 74,530 | 177 | 74,353 | 3,758 | |
| Kollegal .. | Special protection .. | 37,685 | 67,717 | 3,327 | 64,390 | 3,059 | |
| | General do. .. | 323,565 | 399,490 | 7,031 | 392,459 | .. | |
| | Total .. | 361,250 | 467,207 | 10,358 | 456,849 | 3,059 | |
| Coimbatore, North. | Special protection .. | 64,849 | 72,484 | 850 | 71,634 | 3,223 | |
| | General do. .. | 494,836 | 517,494 | 8,231 | 509,263 | .. | |
| | Total .. | 559,685 | 589,978 | 9,081 | 580,897 | 3,223 | |
| Coimbatore, Central. | Special protection .. | 104,696 | 105,122 | 147 | 104,975 | 2,384 | (*a*) Cost of previous year disbursed during the year. |
| | | | | | | (*a*) + 19 | |
| | | | | | | (*b*) — 82 | |
| | General do. .. | 120,330 | 120,841 | 111 | 120,730 | .. | |
| | Total .. | 225,026 | 225,963 | 258 | 225,705 | 2,371 | |
| Coimbatore, South. | Special protection .. | 42,614 | 45,737 | 237 | 45,500 | 2,328 | (*b*) Cash recovery of service payments. |
| | General do. .. | 181,000 | 182,540 | 6,940 | 175,600 | .. | |
| | Total .. | 223,614 | 228,277 | 7,177 | 221,100 | 2,328 | |
| | Total, Special, Western Circle. | 653,798 | 729,357 | 5,311 | 724,046 | 27,586 | |
| | | | | | | + 731 | |
| | Total, General, Western Circle. | 1,488,911 | 1,588,550 | 23,605 | 1,564,945 | 1,049 | |
| | Grand total .. | 2,142,709 | 2,317,907 | 28,916 | 2,288,991 | 29,366 | |
| | Total, Special protection. | 3,567,525 | 3,963,473 | 2,61,613 | 3,701,860 | 1,36,517 | |
| | Total, General protection. | 5,627,437 | 5,974,923 | 1,70,611 | 5,804,312 | 3,584 | |
| | Grand total, Presidency .. | 9,194,962 | 9,938,396 | 4,32,224 | 9,506,172 | 1,40,101 | |

## Annual Form No. 73.

*Forest Department, Madras Presidency.*

**Area closed and open to grazing during 1914–15.**

| District. | Area in square miles. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Closed to all animals. | | Closed to both goats and sheep. | | Area closed to goats only. | Open to all animals. | Total forest area as per form No. 65. |
| | Whole year. | Part of year. | Whole year. | Part of year. | | Whole year. | |
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| **Northern Circle.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| Ganjam | 82 | .. | .. | .. | (c) 487 | .. | 569 |
| Vizagapatam | 15 | .. | 2 | .. | 294 | .. | 311 |
| Godavari, Upper | 2 | .. | .. | .. | 426 | .. | 428 |
| Do. Lower | 43 | .. | 229 | .. | 132 | .. | 404 |
| Kistna | 58 | .. | .. | .. | 213 | .. | 271 |
| Kurnool, East | 157 | .. | .. | .. | 843 | .. | 1,000 |
| Do. South | 566 | .. | .. | .. | 200 | .. | 766 |
| Do. West | 240 | .. | .. | .. | 627 | .. | 867 |
| Total | 1,163 | .. | 231 | .. | 3,222 | .. | 4,616 |
| *Reserved lands.* | | | | | | | |
| Ganjam | .. | .. | .. | .. | 70 | .. | 70 |
| Vizagapatam | .. | .. | .. | .. | 3 | .. | (a) 3 |
| Godavari, Upper | .. | .. | .. | .. | 354 | .. | 354 |
| Do. Lower | .. | .. | .. | .. | 75 | .. | 75 |
| Kistna | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East | .. | .. | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. | .. | .. |
| Do. West | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | .. | .. | .. | 502 | .. | 502 |
| **Central Circle.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| Bellary | 182 | .. | .. | .. | 357 | 80 | 619 |
| Anantapur | 154 | 15 | .. | .. | 574 | .. | 743 |
| Guntur | 59 | .. | .. | .. | 633 | 122 | 814 |
| Cuddapah, West | 66 | .. | .. | .. | 668 | .. | 734 |
| Do. East | 164 | .. | .. | .. | 920 | .. | 1,084 |
| Nellore | 55 | .. | .. | .. | 674 | .. | 729 |
| Chingleput | 40 | .. | .. | .. | 166 | 3 | 209 |
| Chittoor | 156 | 29 | .. | .. | 650 | 3 | 838 |
| Total | 876 | 44 | .. | .. | 4,642 | 208 | 5,770 |
| *Reserved lands.* | | | | | | | |
| Bellary | 63 | .. | .. | .. | .. | .. | 63 |
| Anantapur | .. | .. | .. | .. | .. | 10 | 10 |
| Guntur | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West | .. | .. | .. | .. | .. | .. | .. |
| Do. East | .. | .. | .. | .. | .. | .. | .. |
| Nellore | .. | .. | .. | .. | .. | .. | .. |
| Chingleput | .. | .. | .. | .. | .. | .. | .. |
| Chittoor | .. | .. | .. | .. | .. | .. | .. |
| Total | 63 | .. | .. | .. | .. | 10 | 73 |
| **Southern Circle** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| Vellore, North | 54 | .. | .. | .. | 437 | .. | 491 |
| Do. South | 51 | .. | .. | .. | 661 | .. | 712 |
| South Arcot | 34 | .. | .. | .. | 302 | .. | 336 |
| Salem, North | 102 | .. | .. | .. | 690 | .. | 792 |
| Do. South | 66 | .. | .. | .. | 515 | .. | 581 |
| Trichinopoly | 44 | 2 | .. | .. | 309 | .. | 355 |
| Madura | 94 | .. | .. | .. | 563 | .. | 657 |
| Tinnevelly | 225 | 53 | 2 | 2 | 147 | .. | 429 |
| Total | 670 | 55 | 2 | 2 | 3,624 | .. | 4,353 |
| *Reserved lands.* | | | | | | | |
| Vellore, North | .. | .. | .. | .. | (b) | .. | .. |
| Do. South | .. | .. | .. | .. | (b) | .. | .. |
| South Arcot | .. | .. | .. | .. | .. | .. | .. |
| Salem, North | .. | .. | .. | .. | 46 | .. | 46 |
| Do. South | .. | .. | .. | .. | 18 | .. | 18 |
| Trichinopoly | .. | .. | .. | | 9 | .. | 9 |
| Madura | .. | .. | .. | .. | (b) | .. | .. |
| Tinnevelly | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | .. | .. | .. | 73 | .. | 73 |

(a) Includes 20·5 square miles of Karakavalasa leased forests and its east and west blocks.
(b) Area omitted being less than a square mile.
(c) Excludes 167 square miles belonging to the Parlakimedi Maliahs.

## Area closed and open to grazing during 1914–15—*cont.*

| District. | Area in square miles. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Closed to all animals. | | Closed to both goats and sheep. | | Area closed to goats only. | Open to all animals. | Total forest area as per Form No. 65. |
| | Whole year. | Part of year. | Whole year. | Part of year. | | Whole year. | |
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | | SQ. MLS. |
| **WESTERN CIRCLE.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| South Canara .. .. | 10 | .. | .. | .. | 788 | .. | 798 |
| Malabar, North .. .. | 30 | .. | 233 | .. | .. | .. | 263 |
| Do. South .. .. | 143 | .. | .. | .. | .. | .. | 143 |
| The Nilgiris .. .. | 23 | .. | .. | .. | 452 | .. | 475 |
| Kollegal .. .. .. | 79 | .. | .. | .. | 651 | .. | 730 |
| Coimbatore, North .. | 57 | .. | .. | .. | 865 | .. | 922 |
| Do. Central .. | 147 | .. | .. | .. | 206 | .. | 353 |
| Do. South .. | 85 | 3 | 179 | .. | 187 | .. | 454 |
| Total .. | 574 | 3 | 412 | .. | 3,149 | .. | 4,138 |
| *Reserved lands.* | | | | | | | |
| South Canara .. .. | .. | .. | .. | .. | * | .. | * |
| Malabar, South .. .. | 20 | .. | .. | .. | .. | .. | 20 |
| The Nilgiris .. .. | 4 | .. | .. | .. | 79 | .. | 83 |
| Kollegal .. .. .. | .. | .. | .. | .. | 1 | .. | 1 |
| Coimbatore, North . | .. | .. | .. | .. | * | .. | * |
| Do. Central .. | 10 | .. | .. | .. | .. | .. | 10 |
| Do. South .. | * | .. | .. | .. | * | .. | * |
| Total .. | 34 | .. | .. | .. | 80 | .. | 114 |
| Grand total .. | 608 | 3 | 412 | .. | 3,229 | .. | 4,252 |
| Grand total, Presidency .. | 3,380 | 102 | 645 | 2 | 15,292 | 218 | 19,639 |

* Less than one square mile.

ANNUAL FORM No. 74.

*Forest Department, Madras Presidency.*

RETURN of Grazing in the State forests during 1914–15.

ANNUAL.

*Forest Department,*

RETURN of grazing in the

| Districts. | Grazing on payment. Number of animals. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | 5) | (6) | (7) | (8) | (9) | (10) | (11) |
| NORTHERN CIRCLE. | | | | | Rs. | | | | | Rs. |
| Ganjam .. .. | .. | .. | .. | .. | .. | (*a*) & (*p*) 10,785 | (*p*) & (*q*) 37,191 | (*a*) S 570 | .. Fodder grass. | 11,075 (*r*) 153 |
| Vizagapatam .. | (*b*) 223 | (*b*) 3,174 | (*b*) S 3,471 | .. | 1,839 | (*a*) 1,255 | (*a*) 17,143 | (*a*) S 1,586 | .. | 3,834 |
| Godavari, Upper.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | (*f*) 1,199 | (*f*) 478 | .. | .. | 1,078 | (*h*) 2,423 | (*h*) 2,856 | .. | .. | 1,925 |
| Kistna .. .. | (*f*) 415 | (*f*) 5,057 (*i*) 1,742 | (*f*) S 2,083 | .. | 4,340 | (*a*) 4,656 | (*a*) 20,039 | (*a*) S 19,199 | .. Fodder grass. | 7,808 612 |
| Kurnool, East .. | (*b*) 7,487 | (*b*) 78,479 | (*b*) S 35,345 | .. | 27,744 | (*a*) 1,745 | (*a*) 7,230 | (*a*) S 22,589 | .. | 4,128 |
| Do. South .. | (*b*) 703 | (*b*) 4,712 | (*b*) S 7,709 | .. | 2,493 | (*a*) 2,274 | (*a*) 15,007 | (*a*) S 26,128 | .. Fodder grass. | 6,116 366 |
| Do. West .. | (*b*) 5,080 | (*b*) 31,154 | (*b*) S 16,404 | .. Fodder grass. | 12,379 21 | (*a*) 4,101 | (*a*) 34,859 | (*a*) S 63,096 | .. | 13,989 |
| Total .. | 15,107 | 124,796 | S 65,012 | Fodder grass. | 49,394 | (*a*1) 27,239 | 134,825 | S 133,168 | Fodder grass .. | 49,501 |
| *Unreserved lands.* | | | | | | | | | | |
| Godavari, Upper.. | (*o*) 139 | (*o*) 240 | (*c*) S 2,078 (*o*) G 2,150 | .. | 439 | . | . | .. | .. | .. |
| Do. Lower.. | (*f*) 186 | (*f*) 29 | .. | .. | 150 | (*h*) 6,613 | (*h*) 7,222 | .. | .. Fodder grass. | 7,607 20 |
| Kistna .. .. | .. | .. | .. | .. | .. | (*a*) 702 | (*a*) 222 | .. | .. Fodder grass. | 305 223 |
| Total .. | 325 | 269 | S 2,078 G 2,150 | .. | 589 | 7,315 | 7,444 | .. | Fodder grass .. | (*a*1)8,155 |
| Grand total .. | 15,432 | 125,065 | S 67,090 G 2,150 | Fodder grass | 49,988 | (*a*1) 34,554 | 141,769 | S 133,168 | Fodder grass .. | (*a*1)57,656 |
| CENTRAL CIRCLE. | | | | | | | | | | |
| Bellary .. .. | .. | .. | G 29,208 | .. | 7,302 | 15,641 | 73,037 | S 160,644 | .. | 34,620 |
| Anantapur .. | .. | .. | .. | .. | .. | 4,723 | 80,399 | S 166,460 | .. | 32,451 |
| | .. | .. | .. | .. | .. (*o*) | 65 | 1,900 | 8,434 | .. | 586 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 429 |
| Guntur .. .. | (*p*) 620 | 2,202 | G 56,999 S 11,334 | .. | 16,527 | 16,232 | 22,876 | S 103,254 | .. | 20,056 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | (*q*) 1,528 | 61,097 | S 75,869 | .. | 38,283 | .. | .. | .. | .. | .. |
| | (*r*) .. | 6,759 | .. | .. | 6,759 | .. | .. | .. | .. | .. |
| Cuddapah, West. | .. | .. | .. | .. | .. | 2,135 | 37,790 | S 105,244 | .. | 17,753 |
| | .. | .. | .. | .. | .. | Penning fees. | | | .. | 101 |
| Do. East.. | .. | .. | .. | .. | .. | 3,458 | 46,593 | S 79,218 | .. | 17,460 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | (*s*) .. | 54,423 | S 109,687 | .. | 27,317 | 6,851 | .. | .. | .. | 2,669 |
| | (*t*) .. | .. | .. | .. | .. | Kancha rent. | | | .. | 32,024 |
| Chingleput .. | .. | .. | G 426 | .. | 106 | 2,258 | 29,847 | S 68,297 | .. | 12,846 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 283 |
| Chittoor .. | .. | .. | G 770 | .. | 578 | 2,462 | 78,990 | S 64,663 | .. | 21,796 |
| | .. | .. | .. | .. | .. | Penning fees. | | | .. | 22 |
| Total .. | 2,148 | 124,481 | G 87,403 S 196,890 | .. | 96,872 | 53,825 | 371,432 | S 756,214 | .. | 1,92,996 |

G = Goats. S = Sheep.

(*a*) The full rates are 6 annas per buffalo, 3 annas per cow or bullock and 1 anna 6 pies per sheep.

(*o*) Enhanced rates in Godavari Upper are 8 annas per buffalo, 5 annas per cow or bullock and 1 anna per sheep and 1 anna 6 pies per goat.

(*c*) Privileged rates in Nugur taluk are 4 annas per buffalo, 2 annas per cow or bull, 1 anna 3 pies per goat and 1 anna per sheep.

(*h*) The rates are 8 annas per buffalo and 4 anna per cow or bull.

*Central Circle.*—The full or normal rates are As. 6 per buffalo, As. 3 per cow and As. 1-6 per sheep.

(*o*) Half the normal rates for half-year in Anantapur.

The enhanced or special rates are—

Goats—Bellary, Guntur and Chingleput, As. 4; Chittoor, As. 12.

Guntur ..
- (*p*) As. 8 per buffalo, As. 4 per cow and As. 2 per sheep.
- (*q*) As. 12 per buffalo, As. 6 per cow, and As. 3 per sheep.
- (*r*) Plough bullocks at Re. 1.

Nellore ..
- (*s*) As. 4 per cow and As. 2 per sheep.
- (*t*) Kancha rent is charged at a minimum rate of As. 8 per cow unit.

(*a*1) Corrected in the Board's office.

(*p*) Excludes 431 buffaloes belonging to Parlakemedi Maliahs.

(*q*) Excludes 1,452 cows belonging to Parlakemedi Maliahs.

(*r*) Excludes Rs. 434 collected in the Parlakemedi Maliahs.

FORM No. 74.

*Madras Presidency.*

State forests during 1914-15.

| At privileged rates. | | | | | | Grazing free. Number of animals. | | | | | | | | | | Grand total of value at full rates. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Fees received. | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Actual. | Value at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Total value of fees at full rates. | |
| (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11,228 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,838 |
| (*d*) 5,156 | (*d*) 25,300 | (*d*) S 10,076 | .. | 2,541 | 7,622 | .. | .. | .. | .. | .. | 4,340 | 45,247 | S 20 | .. | 10,113 | 10,113 | 17,735 |
| (*n*) 1,573 | (*n*) 14,499 | .. | .. | 3,245 | 8,722 | .. | .. | .. | .. | .. | 91 | 523 | .. | .. | 176 | 176 | 11,542 |
| (*l*) 604 | (*l*) 16,035 | | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9,541 |
| .. | .. | .. | .. | .. | .. | 157 | 235 | G 762<br>S 1,140 | .. | 281 | .. | .. | .. | .. | .. | . | 24,936 |
| .. | .. | .. | .. | .. | .. | 2 | 26 | S 66 | .. | 12 | .. | .. | .. | .. | .. | .. | 7,998 |
| .. | .. | .. | .. | .. | .. | .. | 1,491 | S 3,303 | .. | 589 | .. | .. | .. | .. | .. | .. | 26,389 |
| 7,333 | (*o*) 55,834 | S 10,076 | .. | 5,786 | 16,344 | 159 | 1,752 | G 762<br>S 4,509 | .. | 882 | 4,431 | (*o*) 45,770 | S 20 | .. | 10,289 | 10,289 | 1,14,207 |
| (*e*) 6,778 | (*e*) 37,385 | (*e*) S 1,576<br>G 812 | .. | 6,280 | 9,400 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9,388 |
| .. | . | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,727 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 538 |
| 6,778 | 37,385 | S 1,576<br>G 812 | .. | 6,280 | 9,400 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*o*) 18,148 |
| 14,111 | (*o*) 93,219 | S 11,652<br>G 812 | .. | 12 066 | 25,744 | 159 | 1,752 | S 4,509<br>G 762 | .. | 882 | 4,431 | (*o*) 45,770 | S 20 | .. | 10,289 | 10,289 | (*o*) 1,32,355 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 41,922 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 83,466 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81,625 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*u*) .. | 157 | S. 200 | .. | 24 | 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17,902 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*v*) .. | 154 | .. | .. | 31 | 71 | .. | 807 | .. | .. | 151 | .. | .. | .. | .. | .. | .. | 17,682 |
| (*w*) .. | 223 | .. | .. | | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*x*) .. | .. | S. 1 | .. | | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,489 | .. | .. | 1,122 | 1,122 | 68,032 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | .. | 15 | 15 | 13,250 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | |
| .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | 22,396 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | 534 | S 201 | .. | 55 | 119 | .. | 807 | .. | .. | 151 | .. | 4,570 | .. | .. | 1,137 | 1,137 | 2,91,275 |

(*b*) Enhanced rates are 8 annas per buffalo, 4 annas per cow or bull and 2 annas per sheep.
(*d*) The privileged rates in Bhadrāchalam taluk are 2 annas per buffalo, 1 anna per cow or bullock and 6 pies per sheep.
(*f*) The enhanced rates are 12 annas per buffalo, 6 annas per cow or bullock and 3 annas per sheep.
(*i*) At Re. 1 per plough bull.
(*l*) At Anna 1 per buffalo or cow or bull.
(*n*) At 4 annas per buffalo and 2 annas per bull or cow.

The privileged rates are—
West Cuddapah .. (*u*) As. 1-6 per cow and 9 pies per sheep.
East Cuddapah .. (*v*) As. 1 per cow.
(*w*) As. 1-6 per cow.
(*x*) Ps. 6 per sheep.
(*o*) Corrected in the Board's office.

## Return of Grazing in the

| District. | Grazing on payment. Number of animals. At enhanced or special rates. Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | At full rates. Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
|---|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| **SOUTHERN CIRCLE.** | | | | | RS. | | | | | RS. |
| Vellore, North | .. | .. | .. | .. | .. | 2,271 | 68,869 | S. 104,954 | .. | 23,604<br>(a) 74 |
| Do. South | .. | 23,468 | .. | .. | 5,867 | 1,912 | 87,563 | S. 58,263 | .. | 22,597<br>(c) 102 |
| Arcot, South | .. | (d) 272 | (e) S. 430 | .. | 125 | 5,251 | 70,373 | S. 151,921 | .. | (g) 29,207 |
| Salem, North | 1,940 | 87,479 | S. 28,852 | .. | 26,446 | 93 | 20,674 | S. 14,578 | .. | 5,278<br>(a) 335<br>(b) 86 |
| Do. South | .. | .. | .. | .. | .. | 838 | 91,336 | S. 32,659 | .. | 20,502 |
| Trichinopoly | .. | .. | G. 130 | .. | 33 | 2,414 | 50,607 | S. 183,590 | .. | 27,605 |
| Madura | 444 | 63,628 | S. 42,835 | 483 | 21,604 | .. | .. | .. | .. | .. |
| Tinnevelly | .. | .. | .. | .. | .. | 612 | 17,721 | S. 32,495 | .. | 6,599<br>(a) 23<br>(f) 236 |
| Total | 2,384 | 174,847 | G. 130<br>S. 72,117 | 483 | 54,075 | 13,391 | 407,143 | S. 578,460 | .. | 1,36,248 |
| **WESTERN CIRCLE.** | | | | | | | | | | |
| *Reserved Forests.* | | | | | | | | | | RS. |
| South Canara | .. | .. | .. | .. | .. | 5,317 | 37,031 | .. | .. | 8,937 |
| Malabar, North | .. | .. | .. | .. | .. | 3,388 | 6,919 | .. | .. | 2,568 |
| Do. South | .. | .. | .. | .. | .. | .. | .. | .. | .. | (k) 1 |
| The Nilgiris | .. | (i) 1,436<br>(j) 58 | .. | .. | 732 | 10,304 | 23,230 | 2,150 | .. | 8,421<br>(k) 249 |
| Kollegal * | 2,749 | 77,305 | 5,329 | .. | 21,367 | .. | .. | .. | .. | .. |
| Coimbatore, North * | 5,893 | 80,291 | 32,471 | .. | 27,078<br>(k) 2,008<br>(l) 25 | .. | .. | .. | .. | .. |
| Do. Central | .. | .. | .. | .. | .. | 242 | 17,846 | 16,996 | .. | 5,030<br>(k) 1,001<br>(n) 1,074 |
| Do. South | .. | .. | .. | .. | .. | 508 | 38,778 | 416 | (m) 3 | 2,683<br>(k) 868 |
| Total | 8,642 | 159,090 | 37,800 | .. | 51,210 | 19,759 | 123,804 | 19,562 | 3 | 30,832 |
| *Reserved Lands.* | | | | | | | | | | |
| The Nilgiris | .. | (i) 315 | .. | .. | 157 | 775 | 923 | .. | .. | 464 |
| Total, Western Circle | 8,642 | 159,405 | 37,800 | | 51,367 | 20,534 | 124,727 | 19,562 | 3 | 31,296 |
| Grand Total, Presidency | 28,606 | 583,798 | (S) 373,897<br>(G) 89,683 | 483 | 2,52,297 | 122,304 | 1,045,071 | (S) 1,487,404 | 3 | 4,18,196 |

G. = Goats. S. = Sheep.

The enhanced or special rates are buffalo 8 annas and sheep 2 annas in North Salem and Madura, cow, bullock or other animals 4 annas in South Vellore, North Salem and Madura and goats 4 annas in Trichinopoly.

The full rates are 6 annas per buffalo, 3 annas per cow, bullock or other animal and 1½ annas per sheep.

The privileged rates are half the full rates.

(a) Collection from panchayatdars.
(b) Sale-proceeds of fodder grass.
(c) Penning license fee.
(d) Two hundred and forty-four cows at 4 annas each and 28 cows at 5 annas each.
(e) Three hundred and sixty-nine sheep at 2 annas each and 61 sheep at 2½ annas each.
(f) Lease amount for grazing in Kavalkuttiparambu reserved forest.
(g) Excludes Rs. 200 collected in previous years.

### WESTERN CIRCLE REMARKS.

The full rates are As. 6 per buffalo, As. 3 per cow, bullock or other animals and As. 1-6 per sheep.

(i) Annas 8 per cow or bullock.
(j) Calves, half-rate.
(k) Sale-proceeds of fodder grass.
(l) Recovery of cost of permits lost.
(m) Elephants at Rs. 10 each.
(n) Revenue from reserved forests handed over to Panchayat.

State forests during 1914-15—*cont.*

| At privileged rates. | | | | | | Grazing free. Number of animals. | | | | | | | | | | Grand total of value at full rates. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Fees received. | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. (12) | Cows and bullocks. (13) | Goats and sheep. (14) | Other animals. (15) | Actual. (16) | Value at full rates. (17) | Buffaloes. (18) | Cows and bullocks. (19) | Goats and sheep. (20) | Other animals. (21) | Value of fees at full rates. (22) | Buffaloes. (23) | Cows and bullocks. (24) | Goats and sheep. (25) | Other animals. (26) | Value of fees at full rates. (27) | Total value of fees at full rates. (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs. | Rs. |
| 61 | 677 | .. | .. | 75 | 150 | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*h*) 2,961 | 2,961 | 26,789 |
| 2,499 | 14,501 | S. 531 | .. | 1,853 | 3,706 | .. | .. | .. | .. | .. | 140 | 1,274 | S. 9 | .. | 292 | 292 | 32,564 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*h*) 56 | 56 | 29,388 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 150 | .. | .. | 28 | 28 | 32,173 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,502 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 27,638 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21,604 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,858 |
| 2,560 | 15,178 | S. 531 | .. | 1,928 | 3,856 | .. | .. | .. | .. | .. | 140 | 1,424 | S. 9 | .. | 3,337 | 3,337 | 1,97,516 |
| .. | .. | .. | (*p*) 17,820 | 2,228 | (*h*) 2,228 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11,165 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*q*) 1 | 91 | 91 | 2,659 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| .. | .. | (*o*) 10,944 | .. | 42 | 1,026 | .. | .. | .. | .. | .. | 2,081 | .. | .. | .. | 780 | 780 | 11,208 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21,367 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 29,111 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,105 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3,551 |
| .. | .. | 10,944 | 17,820 | 2,270 | 3,254 | .. | .. | .. | .. | .. | 2,081 | .. | .. | 1 | 871 | 871 | 86,167 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 621 |
| .. | .. | 10,944 | 17820 | 2,270 | 3,254 | .. | .. | .. | .. | .. | 2,081 | .. | .. | 1 | 871 | 871 | 86,788 |
| 16,671 | 108,981 | (S). 23,328 (G). 812 | 17,820 | 16,319 | 32,973 | 159 | 2,559 | 4,599 | 762 | 1,633 | 6,652 | 51,764 | 29 | 1 | 15,634 | 15,634 | 7,07,934 |

(*h*) Free removal of grass.

* Annas 8 per buffalo, As. 4 per cow, bullock or other animals and As. 2 per sheep.

(*o*) Annas 3 per 100 per diem.

(*p*) Buffaloes, cows, etc., brought for a cattle fair charged without distinction at a uniform rate of As. 2 per head.

(*q*) Elephant.

ABSTRACT of animals licensed to graze on payment.

| Circle. | Buffaloes. | Bullocks and cows. | Sheep. | Goats. | Other animals. | Total. |
|---|---|---|---|---|---|---|
| Northern Circle .. .. | 64,097 | 360,053 | 211,910 | 2,962 | .. | 639,022 |
| Central Circle .. .. .. | 55,973 | 496,447 | 953,305 | 87,403 | .. | 1,593,128 |
| Southern Circle .. .. | 18,335 | 597,168 | 651,108 | * 130 | 483 | 1,267,224 |
| Western Circle .. .. | 29,176 | 284,132 | 68,306 | .. | 17,823 | 399,437 |
| Grand Total, Presidency .. | 167,581 | 1,737,800 | 1,884,629 | 90,495 | 18,306 | 3,898,811 |

* Allowed in Sripurandan padugai reserve land.

## Annual Form No. 75.

*Forest Department, Madras Presidency.*

Area of plantations and topes, 1914–15.

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1914. | Added during the year. | Excluded during the year. | Area on 30th June 1915. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **Northern Circle.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjām .. .. .. .. .. | (*c*) 412 | .. | .. | (*c*) 412 | (*d*) .. | (*e*) 54 | (*f*)28,199 | (*g*) 12,918 | 5,400 | 23,216 |
| Vizagapatam .. .. .. .. | 78 | .. | 27 | 51 | .. | .. | .. | 5 | 295 | 2,885 |
| Gōdāvari, Lower .. .. .. . | 875 | .. | 457 | 418 | .. | 630 | 50,048 | 23,105 | 38,613 | 1,29,177 |
| Kistna .. .. .. .. .. | 917 | .. | 604 | 313 | .. | 398 | 19,540 | 58,960 | 25,969 | 93,002 |
| Kurnool, East .. .. .. .. | 130 | .. | .. | 130 | .. | 504 | 38,471 | 25,538 | .. | .. |
| Do. South .. .. .. .. | * .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. .. .. | 1,255 | 123 | .. | 1,378 | 18,384 | 16,996 | 2,72,826 | 50,046 | 8,317 | 12,657 |
| Total .. | 3,667 | 123 | 1,088 | 2,702 | 18,384 | 18,582 | 4,09,084 | 1,70,572 | 73,594 | 2,60,937 |
| *B.—Taungya Plantations*—Nil. | | | | | | | | | | |
| *C.—Cultural Operations* | | | | | | | | | | |
| Ganjām .. .. .. .. .. | 419 | .. | .. | 419 | .. | 130 | 2,268 | 633 | .. | .. |
| Vizagapatam .. .. .. .. | 44 | .. | .. | 44 | 6 | 4 | 375 | 97 | .. | .. |
| Gōdāvari, Upper .. .. .. .. | 829 | .. | .. | 829 | .. | .. | 2,225 | 830 | .. | 145 |
| Do. Lower .. .. .. .. | 2,402 | .. | .. | 2,402 | .. | .. | 2,359 | 1,032 | .. | .. |
| Kistna .. .. .. .. .. | 3,726 | 304 | 427 | 3,603 | 436 | 88 | 8,774 | 3,662 | 8,654 | 45,094 |
| Kurnool, East .. .. .. .. | 33 | .. | .. | 33 | .. | .. | 9,919 | 3,561 | .. | .. |
| Do. South .. .. .. .. | 300 | 19 | .. | 319 | 652 | 32 | * 7,721 | * 917 | .. | .. |
| Do. West .. .. .. .. | 2,418 | 20 | .. | 2,438 | .. | .. | 21,274 | 118 | .. | .. |
| Total .. | 10,171 | 343 | 427 | 10,087 | 1,094 | 249 | 54,915 | 10,850 | 8,654 | 45,239 |
| Total, Northern Circle .. | 13,838 | 466 | 1,515 | 12,789 | 19,478 | 18,831 | 463,999 | 1,81,422 | 82,248 | 3,06,176 |
| **Central Circle.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| Bellary .. .. .. .. | 579 | .. | .. | 579 | .. | 308 | 9,423 | 62,455 | .. | 14 |
| Anantapur .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. .. .. | (*a*)2,951 | .. | 117 | 2,834 | .. | 1,356 | 51,814 | 32,519 | 13,189 | 42,422 |
| Cuddapah, West .. .. .. | 10 | .. | .. | 10 | . | .. | 560 | .. | .. | .. |
| Do. East .. .. .. | 8 | .. | . | 8 | .. | 83 | .. | 267 | 1,232 | 1,425 |
| Nellore .. .. .. .. | (*a*)4,624 | .. | 664 | 3,960 | .. | 4,188 | 1,56,705 | 15,408 | 69,000 | 5,66,774 |
| Chingleput .. .. .. .. | 356 | .. | .. | 356 | .. | 240 | 8,103 | 5,741 | 663 | 11,358 |
| Chittoor .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 8,528 | .. | 781 | 7,747 | .. | 6,175 | 2,26,605 | 1,16,390 | 84,084 | 6,21,993 |
| *B.—Taungya Plantations*—Nil. | | | | | | | | | | |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Bellary .. .. .. .. | 20,690 | .. | .. (*b*) | 20,690 | .. | 314 | 84,252 | 11,031 | .. | .. |
| Anantapur .. .. .. .. | 70,977 | 196 | 70,977 | 196 | 271 | .. | 39,915 | 593 | .. | 274 |
| Guntūr .. .. .. .. | (*a*) .. | .. | .. | .. | .. | .. | 348 | .. | .. | .. |
| Cuddapah, West .. . .. | 1,713 | .. | .. | 1,713 | . | .. | 855 | 136 | 560 | 3,100 |
| Do. East .. .. .. | 1,791 | .. | .. | 1,791 | .. | 325 | 492 | 1,879 | 670 | 698 |
| Nellore .. .. .. .. | (*a* 116 | .. | .. | 116 | .. | 7 | 2,276 | 12 | .. | .. |
| Chingleput .. .. .. .. | 14,583 | .. | .. | 14,583 | .. | 427 | 2,715 | 4,826 | .. | .. |
| Chittoor .. .. .. .. | 230 | 47 | .. | 277 | 187 | 126 | 583 | 986 | 184 | 285 |
| Total .. | 110,100 | 243 | 70,977 | 39,366 | 458 | 1,199 | 1,31,436 | 19,463 | 1,414 | 4,857 |
| Total, Central Circle .. | 118,628 | 243 | 71,758 | 47,113 | 458 | 7,374 | 3,58,041 | 1,35,353 | 85,498 | 6,26,350 |

* Correct figures furnished by the Collector.

(*a*) Revised figures furnished by Collectors.
(*b*) The Collector reports that this area has been dropped as there are no plantations in the area.
(*c*) Excludes 6½ acres belonging to Parlākimedi Maliahs.
(*d*) Excludes Rs. 17-4-0 spent on teak plantations in Parlākimedi Maliahs.
(*e*) Do. Rs. 123-8-0 do. do.
(*f*) Do. Rs. 17-4-0 do. do.
(*g*) Do. Rs. 217-7-10 do. do.

## Area of plantations and topes, 1914–15—*cont.*

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1914. | Added during the year. | Excluded during the year. | Area on 30th June 1915. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| | | | | | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| **SOUTHERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| North Vellore | 1,267<br>(*a*) −78 | 16 | 1,046 | 159 | 892 | 1,109 | 17,974 | 1,32,261 | 5,515 | 76,032 |
| South do. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Arcot | 70 | .. | 70 | .. | .. | .. | .. | .. | .. | .. |
| North Salem | (*b*)+143 | .. | .. | 143 | 168 | .. | 8,928 | .. | .. | .. |
| South do. | 553 | .. | 222 | 331 | .. | .. | 33,433 | (*c*) 8,648 | 596 | (*c*) 10,339 |
| Trichinopoly | 146 | .. | .. | 146 | .. | 25 | 34,561 | 9,853 | 1,002 | 34,578 |
| Madura | 672 | 610 | .. | 1,282 | 3,113 | 1,037 | 38,789 | 6,944 | 170 | 2,328 |
| Tinnevelly | 1,798 | 7 | .. | 1,805 | 172 | 393 | 3,610 | 6,693 | .. | .. |
| Total | 4,506<br>+ 65 | 633 | 1,338 | 3,866 | 4,345 | 2,564 | 1,37,295 | 1,64,399 | 7,283 | 1,23,277 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| North Vellore | 818<br>(*d*) −132 | .. | .. | 686 | .. | 15 | 77 | 281 | 33 | 129 |
| South do. | 140 | .. | 47 | 93 | .. | .. | .. | .. | 204 | 2,476 |
| South Arcot | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| North Salem | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South do. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Trichinopoly | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Madura | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Total | 959<br>−132 | .. | 48 | 779 | .. | 15 | 77 | 281 | 237 | 2,605 |
| *C.—Cultural Operations.* | | | | | | | | | | |
| North Vellore | 840 | .. | .. | 840 | 43 | 39 | 63 | 98 | 1 | 579 |
| South do. | 821 | .. | .. (*e*) | 821 | .. | 39 | 267 | 149 | .. | .. |
| South Arcot | 5,169 | .. | 5,169 | .. | .. | .. | .. | .. | .. | .. |
| North Salem | 577 | .. | 564 | 13 | .. | .. | (*f*) .. | (*f*) 1,255 | 12 | (*f*) 557 |
| South do. | 816 | 20 | .. | 836 | 39 | 71 | 2,005 | 1,206 | .. | 152 |
| Trichinopoly | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Madura | 13 | .. | 13 | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly | 3,456 | 210 | .. | 3,666 | 61 | 641 | 4,774 | 821 | .. | .. |
| Total | 11,692 | 230 | 5,746 | 6,176 | 143 | 840 | 7,109 | 3,529 | 13 | 1,288 |
| Total, Southern Circle | 17,090 | 863 | 7,132 | 10,821 | 4,488 | 3,419 | 1,44,481 | 1,68,209 | 7,533 | 1,27,170 |
| **WESTERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| South Canara | 124 | .. | 70 | 54 | .. | .. | 2,462 | 7,067 | 38 | 18,190 |
| Malabar, North | 871 | 2 | .. | 873 | 32 | 827 | 15,272 | 18,732 | 999 | 1,939 |
| Do. South | 6,473<br>(*g*)+1 | .. | .. | 6,474 | .. | 4,279 | 5,37,942 | 5,31,041 | 1,15,827 | 18,78,831 |
| The Nilgiris | 1,766<br>(*g*)−91 | .. | .. | 1,675 | .. | 1,195 | 6,462 | 2,83,469 | 27,520 | 5,74,323 |
| Coimbatore, Central | 595 | 7 | .. | 602 | 16 | .. | 548 | 255 | .. | .. |
| Do South | 157 | .. | .. | 157 | .. | 1,094 | 9,947 | 4,318 | .. | .. |
| Total | 9,896 | 9 | 70 | 9,835 | 48 | 7,395 | 5,72,633 | 8,44,882 | 1,44,384 | 24,73,283 |

(*a*) Area wrongly included in previous years.
(*b*) Omitted to be shown in previous years.
(*c*) Difference due to deduction of amounts for areas excluded in 1913–14.
(*d*) Correct figure furnished by the District Forest officer.
(*e*) Unsuccessful area under cultural operations abandoned.
(*f*) Difference due to exclusion of areas during the year.
(*g*) Rectification due to adoption of correct area.

## Area of plantations and topes, 1914-15—*cont.*

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1914. | Added during the year. | Excluded during the year. | Area on 30th June 1915. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| | | | | WESTERN CIRCLE—*cont.* | | | | | | |
| | | | | *B.—Taungya.* | | | | | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| South Canara .. .. .. .. | 1,193 | .. | .. | 1,193 | .. | .. | 46 | 52 | .. | .. |
| Malabar, North .. .. .. .. | 753 | 9 | .. | 762 | .. | .. | .. | 10,728 | .. | 4,978 |
| Total .. | 1,946 | 9 | .. | 1,955 | .. | .. | 46 | 10,780 | .. | 4,978 |
| | | | | *C.—Cultural Operations.* | | | | | | |
| South Canara .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | (a) 191 | .. | .. |
| Malabar, North .. .. .. .. | 2,977 | 1,365 | .. | 4,342 | 666 | 280 | 2,036 | 7,398 | .. | .. |
| Do. South .. .. .. .. | 215 | .. | .. | 215 | .. | 27 | 2,291 | 1,347 | .. | .. |
| The Nilgiris .. .. .. .. | 97 | .. | .. | 97 | .. | 248 | 367 | 29,762 | .. | .. |
| Kollegal .. .. .. .. | 6,670 | 310 | .. | 6,980 | 14 | .. | 446 | 149 | .. | .. |
| Coimbatore, North .. .. .. | 27,248 | 120 | .. | 27,368 | 103 | .. | 676 | .. | 100 | 259 |
| Do. Central .. .. .. | 768 | 596 | .. | 1,364 | 317 | .. | 1,908 | 343 | .. | 37 |
| Do. South .. .. .. | 1,181 | .. | .. | 1,181 | .. | 223 | 2,187 | 1,323 | .. | .. |
| Total .. | 39,156 | 2,391 | .. | 41,547 | 1,100 | 778 | 9,911 | 40,513 | 100 | 296 |
| Grand Total, Western Circle | 50,998 | 2,409 | 70 | 53,337 | 1,148 | 8,173 | 5,82,590 | 8,96,175 | 1,44,484 | 24,78,557 |
| Total. Regular plantations .. | 26,662 | 765 | 3,277 | 24,150 | 22,777 | 34,716 | 13,45,617 | 12,96,248 | 3,09,345 | 34,79,490 |
| Total. Taungya .. .. .. | 2,773 | 9 | 48 | 2,734 | .. | 15 | 123 | 11,061 | 237 | 7,583 |
| Total. Cultural operations .. | 171,119 | 3,207 | 77,150 | 97,176 | 2,795 | 3,066 | 2,03,371 | 74,355 | 10,181 | 51,189 |
| Grand Total, Presidency .. | 200,554 | 3,981 | 80,475 | 124,060 | 25,672 | 37,797 | 15,49,111 | 13,81,659 | 3,19,763 | 35,38,253 |

(a) Cost incurred in sowing seeds broadcast in reserved forests.

ANNUAL

*Forest Department, Madras*

OUTTURN (in cubic feet solid) of Timber and Fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | | | | | | | | | | | | | | | NORTHERN |
| | | | | | | | | | | | | | | | *I. Reserved* |
| | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. |
| Ganjam .. .. | 6,973 | (*b*) 35,043 | 15,780 | .. | 57,796 | 1,702 | 8,915 | 20,010 | .. | (*a*) 30,627 | 1,685 | .. | | .. | 1,685 |
| Vizagapatam .. .. | 1,830 | 61 | .. | .. | 1,891 | .. | 1,711 | 200 | .. | 1,911 | .. | .. | .. | .. | .. |
| Gōdāvari, Upper .. | 658 | .. | .. | .. | 658 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | 934 | 4,157 | .. | .. | 5,091 | 1,069 | .. | .. | .. | 1,069 | .. | 32 | .. | .. | 32 |
| Kistna .. .. | .. | 4,489 | .. | .. | 4,489 | .. | 768 | .. | .. | 768 | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | 5,206 | 12,040 | .. | .. | 17,246 | 10,000 | 1,018 | .. | .. | 11,018 | 4,531 | 1,020 | .. | .. | 5,551 |
| Do. South .. .. | 3,644 | 23,885 | 270 | .. | 27,799 | 93 | 26,936 | 149 | 11 | 27,189 | 1,152 | 180 | .. | .. | 1,332 |
| Do. West .. .. | 31,750 | 140 | .. | .. | 31,890 | 30,495 | .. | 447 | 787 | 31,729 | 44 | .. | .. | .. | 44 |
| Total, Reserved forests. | 50,995 | 79,815 | 16,050 | .. | 146,860 | 43,359 | 39,348 | 20,806 | 798 | 104,311 | 7,412 | 1,232 | .. | .. | 8,644 |
| | | | | | | | | | | | | | | | *II. Leased* |
| | | | | | | | | | | | | | | | *III. Reserved* |
| Upper Gōdāvari .. | 1,098 | .. | .. | .. | 1,098 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | | | | | | | | | | | | | *IV. Unreserved* |
| Ganjam .. .. | 533 | 77,137 | 12,890 | .. | 91,560 | 2,448 | 106,143 | 21,420 | 179,640 | (*a*) 309 651 | 36,208 | (*a* 2,238 | .. | 3,698 | 42,144 |
| Vizagapatam .. .. | .. | 1,917 | .. | .. | 1,917 | .. | 8,175 | .. | .. | 8,175 | .. | 291 | .. | . | 291 |
| Upper Gōdāvari .. | 35,860 | 50,787 | 1,056 | .. | 87,703 | 3,744 | 2,174 | 1,025 | .. | 6,943 | .. | . | .. | .. | .. |
| Lower do. .. .. | 36 | 56,262 | .. | .. | 56,298 | 473 | .. | | .. | 473 | .. | 10,123 | .. | . | 10,123 |
| Kistna .. .. | .. | | .. | .. | .. | .. | | .. | .. | .. | .. | .. | .. | . | . |
| Kurnool, East .. .. | .. | 13,378 | .. | .. | 13,378 | . | 2,208 | .. | .. | 2,208 | .. | . | .. | .. | .. |
| Do. South .. .. | | | 1,240 | .. | 1,240 | .. | .. | 150 | .. | 150 | .. | . | .. | | .. |
| Do. West .. .. | 966 | 1,540 | .. | .. | 2,506 | 23,558 | .. | .. | .. | 23,558 | 45 | . | .. | .. | 45 |
| Total, Unreserved lands. | 37,395 | 201,021 | 16,186 | .. | 254,602 | 30,223 | 118,700 | 22,595 | 179,640 | 351,158 | 36,253 | 12,652 | .. | 3,698 | 52,605 |
| Grand total .. | 89,488 | 280,836 | 32,236 | .. | 402,560 | 73,582 | 158,048 | 43,401 | 180,438 | 455,469 | 43,665 | 13,884 | .. | 3,698 | 61,247 |
| | | | | | | | | | | | | | | | CENTRAL |
| | | | | | | | | | | | | | | | *I. Reserved* |
| Bellary .. .. .. | 27 | .. | .. | .. | (*a*) 27 | 2,041 | 5,650 | .. | .. | 7,691 | .. | .. | .. | .. | .. |
| Anantapur .. .. | 32 | 1,845 | 1,485 | .. | 3,362 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West .. | .. | .. | .. | .. | .. | .. | 1 258 | .. | .. | 1,258 | .. | .. | .. | .. | .. |
| Do. East .. .. | .. | . | .. | .. | .. | 4,111 | 66,743 | 300 | .. | 71,154 | .. | .. | .. | .. | .. |
| Nellore .. .. .. | 398 | 2,202 | .. | .. | 2,600 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | 1,396 | 57,505 | .. | .. | 58,901 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 1,853 | 61 552 | 1,485 | . | 64,890 | 6,152 | 73,651 | 300 | . | 80,103 | .. | .. | .. | .. | .. |

NORTHERN CIRCLE REMARKS.

*Ganjām.*

(*a*) Estimated at 60 cubic feet per cart load.

(*b*) Estimated at 15 cubic feet per tree.

*Vizagapatam.*

Of the total timber 130,019, 126,271 are estimates, 3,748 are actuals.

One cart being equavalent to 20 H. L. or 20 cubic feet.

*Upper Gōdāvari.*

Charcoal—*Nil.*

Timber and Fuel all actuals.

*Lower, Gōdāvari.*

| | C. FT. |
|---|---|
| (*a*) Actuals .. .. .. Figures arrived at, at the rate of 1 anna per cubic foot by commission .. .. .. | 258,165 |
| (*b*) Actuals .. .. .. Figures arrived at, at the rate of 3 pies per cubic foot by commission .. .. .. | 163,841 |
| | 308,223 |
| | 12,296 |

*Kistna.*

The figures shown in column 17 to 19 and 28 are of approximate estimate.

*Kurnool, East.*

All figures are actuals.

*Kurnool, South.*

Timber and fuel shown against purchases are taken from their accounts.

*Kurnool, West.*

All figures are actuals.

* Excludes 1,085 cubic feet belonging to Parlākimedi Maliahs.

† Do. 3,563 do. do.

‡ Do. 436 do. do.

§ Excludes 5,084 cubic feet belonging to Parlākimedi Maliahs.

‖ Do. 18,446 do. do.

¶ Do. 23,550 do. do.

FORM No. 76.

*Presidency.*

during the year 1914–15, and Agency of Exploitation.

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Total outturn. |
| (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT † | C. FT. ‡ | C. FT. | C. FT. § | C. FT. | C. FT. ‖ | | C. FT. | C. FT. (*a*) and ‖ | C. FT. ¶ |
| (*a*) 900 | .. | .. | .. | 900 | 11,260 | 43,958 | 35,790 | .. | 91,008 | 3,000 | 555,485 | .. | .. | 558,485 | 649,493 |
| .. | 7 | .. | .. | 7 | 1,830 | 1,779 | 200 | .. | 3,809 | 105,100 | 2,155 | .. | .. | 107,255 | 111,064 |
| 251 | .. | .. | .. | 251 | 909 | .. | .. | .. | 909 | .. | .. | .. | .. | .. | 909 |
| 1,849 | 194 | .. | .. | 2,043 | 3,852 | 4,383 | .. | .. | 8,235 | 39,631 | 1,332,970 | .. | .. | 1,372,601 | 1,380,836 |
| .. | 9,084 | .. | .. | 9,084 | .. | 14,341 | .. | .. | 14,341 | 47,600 | 1,244,827 | .. | .. | 1,292,427 | 1,306,768 |
| 2,179 | .. | .. | .. | 2,179 | 21,916 | 14,078 | .. | .. | 35,994 | 261 | 48,040 | .. | .. | 48,301 | 84,295 |
| 1,314 | 1,771 | .. | .. | 3,085 | 6,203 | 52,772 | 419 | 11 | 59,405 | 65,974 | 40,278 | .. | 330 | 106,582 | 165,987 |
| 2,970 | .. | .. | .. | 2,970 | 65,259 | 140 | 447 | 787 | 66,633 | 16,549 | 71,160 | .. | 154,506 | 742,215 | 808,848 |
| 9,463 | 11,056 | .. | .. | 20,519 | 111,229 | 131,451 | 36,856 | 798 | 280,334 | 778,115 | 3,294,915 | .. | 154,836 | 4,227,866 | 4,508,200 |
| *Forests.*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| 1,684 | 26 | .. | .. | 1,710 | 2,782 | 26 | .. | .. | 2,808 | .. | .. | .. | .. | .. | 2,808 |
| *Lands.* | | | | | | | | | | | | | | | |
| 6,000 | 156,440 | .. | .. | (*a*) 162,440 | 45,189 | 341,958 | 35,310 | 183,338 | 605,795 | 7,280 | 296,188 | .. | 427,359 | (*a*) 731,527 | 1,337,322 |
| 500 | 115,326 | .. | .. | 115,826 | 500 | 125,709 | .. | .. | 126,209 | .. | 21,152 | .. | .. | 21,152 | 147,361 |
| 11,158 | .. | .. | .. | 11,158 | 50,762 | 52,961 | 2,081 | .. | 105,804 | 2,000 | 197,873 | .. | .. | 199,873 | 305,677 |
| 211 | 354,901 | .. | .. | 355,112 | 720 | 421,286 | .. | .. | (*a*) 422,006 | .. | 320,519 | .. | .. | (*b*) 320,519 | 742,525 |
| 280 | 144,099 | 11,216 | .. | 155,595 | 280 | 144,099 | 11,216 | .. | 155,595 | .. | 52,313 | .. | .. | 52,313 | 207,908 |
| .. | .. | .. | .. | .. | .. | 15,586 | .. | .. | 15,586 | .. | 5,903 | .. | .. | 5,903 | 21,489 |
| .. | 53,610 | .. | .. | 53,610 | .. | 53,610 | 1,390 | .. | 55,000 | .. | 96,108 | .. | .. | 96,108 | 151,108 |
| 13,997 | .. | .. | .. | 13,997 | 38,566 | 1,540 | .. | .. | 40,106 | 80,840 | 174,880 | .. | .. | 255,720 | 295,826 |
| 32,146 | 824,376 | 11,216 | .. | 867,738 | 136,017 | 1,156,749 | 49,997 | 183,338 | 1,526,101 | 90,820 | 1,164,936 | .. | 427,359 | 1,683,115 | 3,209,216 |
| 43,293 | 835,458 | 11,216 | .. | 889,967 | 250,028 | 1,288,226 | 86,853 | 184,136 | 1,809,243 | 868,935 | 4,459,851 | .. | 582,195 | 5,910,981 | 7,720,224 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 2,068 | 5,650 | .. | .. | 7,718 | 3,770 | 118,910 | .. | .. | 122,680 | 130,398 |
| .. | .. | .. | .. | .. | 32 | 1,815 | 1,485 | .. | 3,362 | .. | 16,200 | .. | .. | 16,200 | 19,562 |
| 234 | 24,784 | 96 | .. | 25,114 | 234 | 24,784 | 96 | .. | 25,114 | 295 | 510,384 | .. | .. | 510,679 | 535,793 |
| 2,696 | 4,319 | 1,224 | .. | 8,239 | 2,696 | 5,577 | 1,224 | .. | 9,497 | 1,490 | 524,969 | .. | .. | 526,869 | 535,866 |
| .. | .. | .. | .. | .. | 4,111 | 66,743 | 300 | .. | 71,154 | 14,224 | 1,670,309 | .. | .. | 1,684,533 | 1,755,687 |
| .. | .. | .. | .. | .. | 398 | 2,202 | .. | .. | 2,600 | 13,723 | 1,669,449 | .. | .. | 1,683,172 | 1,685,772 |
| .. | .. | .. | .. | .. | 1,396 | 57,505 | .. | .. | 58,901 | 981 | 79,893 | .. | .. | 80,874 | 139,775 |
| 20 | 13,858 | 520 | .. | 14,398 | 20 | 13,858 | 520 | .. | 14,398 | 335 | 317,568 | .. | .. | 317,903 | 332,301 |
| 2,950 | 42,961 | 1,840 | .. | 47,751 | 10,955 | 178,164 | 3,625 | .. | 192,744 | 34,728 | 4,907,682 | .. | .. | 4,942,410 | 5,135,154 |

CENTRAL CIRCLE REMARKS

(*a*) SANDALWOOD (*Santalum album*).

In cases in which the volume or kind of produce has had to be calculated from the revenue received, the following methods have been adopted :—

*Bellary.*—Two-thirds of the timber removed is assumed to be of the first class and is valued at As. 6 per cubic foot, one-third is assumed to be of the second class and is valued at As. 4 per cubic foot. The volume of a palmyra tree is assumed to be 10 cubic feet and that of individual rafters and poles removed by contract, 1 cubic foot. Of the total volume of fuel removed on contract two-thirds are assumed to be green and are valued at As. 1½ per cubic foot and one-third is assumed to be dry and is valued at 1 anna per cubic foot.

*Anantapur.*—Revenue from timber and fuel is based on the assumption that a cart load contains 45 cubic feet and is worth Rs. 2-8 0 and Rs. 1-4-0, respectively.

*Guntūr.*—The volume of produce removed by contract from the coupes is calculated at a uniform rate of 1 cubic foot for each anna.

*East and West Godavari and Chingleput.*—All the figures of outturn of fuel and timber are stated to be actuals, although this can hardly be the case.

*Nellore.*—The figure in column 22 under "Reserved Forests" consists of two items (1) actuals and (2) estimates. The latter figure is 331·31 cubic feet which was arrived at by assuming one palmyra tree to be equal to 10 cubic feet. The figure in columns 19 and 23 has been arrived at in a similar fashion. The figure in column 28 is based on the assumption that As. 8 represents 20 cubic feet of fuel.

*Chittoor.*—All the figures in this statement except those under purchasers (timber and fuel) against unreserves are actuals. The excepted items are estimates calculated on the money value obtained from sale of trees on dharkast and waste lands at one anna per cubic foot of timber and three pies per cubic foot of fuel.

## Outturn (in cubic feet solid) of Timber and Fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or squared timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| **CENTRAL** | | | | | | | | | | | | | | | |
| *II. Leased* | | | | | | | | | | | | | | | |
| | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | | | C. FT. |
| Bellary .. .. .. | 67 | .. | .. | .. | (a) 67 | 49 | 4,685 | .. | .. | 4,734 | .. | .. | .. | .. | .. |
| Total .. | 67 | .. | .. | .. | 67 | 49 | 4,685 | .. | .. | 4,734 | .. | .. | .. | .. | .. |
| *III. Reserved* | | | | | | | | | | | | | | | |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | 41,037 | 51 | .. | 41,088 | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 290,799 | 2,880 | .. | 293,679 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntur .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. East .. .. | .. | .. | .. | .. | .. | .. | 14,947 | .. | .. | 14,947 | .. | .. | .. | .. | .. |
| Nellore .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | .. | 34,145 | .. | .. | 34,145 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | .. | 324,944 | 2,880 | .. | 327,824 | .. | 55,984 | 51 | .. | 56,035 | .. | .. | .. | .. | .. |
| Grand total .. | 1,920 | 386,496 | 4,365 | .. | 392,781 | 6,201 | 134,320 | 351 | .. | 140,872 | .. | .. | .. | .. | .. |
| **SOUTHERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 1,122 | .. | .. | .. | 1,122 | .. | 240 | .. | .. | 240 | .. | .. | .. | .. | .. |
| Do. South .. .. | 865 | 731 | 975 | .. | 2,571 | 112 | 100 | .. | .. | 212 | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 443 | .. | .. | .. | 443 |
| Do. South .. .. | 421 | .. | .. | .. | 421 | 1,135 | 139 | .. | .. | 1,274 | 1,324 | .. | .. | .. | 1,324 |
| Trichinopoly .. | .. | 434 | .. | .. | 434 | .. | 3 | .. | .. | 3 | 120 | .. | .. | .. | 120 |
| Madura .. .. .. | 2,080 | 291 | 23 | .. | 2,394 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 115 | 10,323 | .. | .. | 10,438 | 729 | 15,424 | 35 | .. | 16,188 | 1,485 | 8,433 | .. | .. | 9,918 |
| Total of reserved forests. | 4,603 | 11,779 | 998 | .. | 17,380 | 1,976 | 15,906 | 35 | .. | 17,917 | 3,372 | 8,433 | .. | .. | 11,805 |
| *II. Leased* | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3,295 | .. | .. | .. | 3,295 |
| Do. South .. .. | 228 | 4 | .. | .. | 232 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Madura .. .. .. | 267 | .. | 445 | .. | 712 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total of unreserved lands. | 495 | 4 | 445 | .. | 944 | .. | 1 | .. | .. | 1 | 3,295 | .. | .. | .. | 3,295 |
| *Ab* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 1,122 | .. | .. | .. | 1,122 | .. | 240 | .. | .. | 240 | .. | .. | .. | .. | .. |
| Do. South .. .. | 865 | 731 | 975 | .. | 2,571 | 112 | 100 | .. | .. | 212 | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3,738 | .. | .. | .. | 3,738 |
| Do. South .. .. | 649 | 4 | .. | .. | 653 | 1,135 | 140 | .. | .. | 1,275 | 1,324 | .. | .. | .. | 1,324 |
| Trichinopoly .. .. | .. | 434 | .. | .. | 434 | .. | 3 | .. | .. | 3 | 120 | .. | .. | .. | 120 |
| Madura .. .. | 2,347 | 291 | 468 | .. | 3,106 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 115 | 10,323 | .. | .. | 10,438 | 729 | 15,424 | 35 | .. | 16,188 | 1,485 | 8,433 | .. | .. | 9,918 |
| Total .. | 5,098 | 11,783 | 1,443 | .. | 18,324 | 1,976 | 15,907 | 35 | .. | 17,918 | 6,667 | 8,433 | .. | .. | 15,100 |

SOUTHERN CIRCLE REMARKS.

*Timber and fuel.—Government agency and free grantee.*—Actuals.
*Reserved forest—Purchasers—Timber.*—Estimates based on the amounts realized.
*Reserved forests and reserved lands—Purchasers—Fuel.*—Estimates based chiefly on the accounts furnished by coupe contractors.
*Unreserved lands—Timber and fuel—Purchasers.*—Estimates based on the money value realized.

during the year 1914–15, and Agency of Exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| CIRCLE—*cont.* | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. |
| .. | .. | .. | .. | .. | 116 | 4,685 | .. | .. | 4,801 | 1,335 | 56,225 | .. | .. | 57,560 | 62,361 |
| .. | .. | .. | .. | .. | 116 | 4,685 | .. | .. | 4,801 | 1,335 | 56,225 | .. | .. | 57,560 | 62,361 |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | 41,037 | 51 | .. | 41,088 | .. | 535,900 | .. | .. | 535,900 | 576,988 |
| .. | .. | .. | .. | .. | .. | 290,799 | 2,880 | .. | 293,679 | .. | 103,104 | .. | .. | 103,104 | 396,783 |
| .. | 181,456 | 10,625 | .. | 192,081 | .. | 181,456 | 10,625 | .. | 192,081 | .. | 158,112 | .. | .. | 158,112 | 350,193 |
| .. | 54,061 | .. | .. | 54,061 | | 54,061 | .. | .. | 54,061 | .. | 331,909 | .. | .. | 331,909 | 385,970 |
| .. | .. | .. | .. | .. | .. | 14,947 | .. | .. | 14,947 | .. | 62,845 | .. | .. | 62,845 | 77,792 |
| .. | 54,578 | 9,319 | .. | 63,897 | .. | 54,578 | 9,319 | .. | 63,897 | .. | 47,829 | .. | .. | 47,829 | 111,726 |
| .. | .. | 1,096 | .. | 1,096 | .. | 34,145 | 1,096 | .. | 35,241 | .. | 78,190 | .. | .. | 78,190 | 113,431 |
| .. | 194,740 | 10,947 | .. | 205,687 | .. | 194,740 | 10,947 | .. | 205,687 | .. | 287,961 | .. | .. | 287,961 | 493,648 |
| .. | 484,835 | 31,987 | .. | 516,822 | .. | 865,763 | 34,918 | .. | 900,681 | .. | 1,605,850 | .. | .. | 1,605,850 | 2,506,531 |
| 2,950 | 527,796 | 33 827 | .. | 564,573 | 11,071 | 1,048,612 | 38,513 | .. | 1,098,226 | 36,063 | 6,569 757 | | .. | 6,605,820 | 7,704,046 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests* | | | | | | | | | | | | | | | |
| 380 | .. | .. | .. | 380 | 1,502 | 240 | .. | .. | 1,742 | 6,164 | 270,880 | .. | .. | 277,044 | 278,786 |
| 2,770 | 5,257 | .. | .. | 8,027 | 3,747 | 6,088 | 975 | .. | 10,810 | 122 | 256,088 | .. | .. | 256,210 | 267,020 |
| 105 | 283 | .. | .. | 388 | 105 | 283 | .. | .. | 388 | 2,022 | 267,585 | 400 | .. | 270,007 | 270,395 |
| 452 | .. | .. | .. | 452 | 895 | .. | .. | .. | 895 | 380 | 163,138 | .. | .. | 163,518 | 164,413 |
| 491 | .. | .. | .. | 491 | 3,371 | 139 | .. | .. | 3,510 | 410 | 575,111 | .. | .. | 575,521 | 579,031 |
| .. | 530 | 9,919 | .. | 10,449 | 120 | 967 | 9,919 | .. | 11,006 | 29,433 | 569,358 | .. | .. | 598,791 | 609,797 |
| .. | .. | .. | .. | .. | 2,080 | 291 | 23 | .. | 2,394 | 3,223 | 630,121 | .. | .. | 633,344 | 635,738 |
| 810 | 8,208 | 179 | .. | 9,197 | 3,139 | 42,388 | 214 | .. | 45,741 | 9,758 | 613,546 | .. | .. | 623,304 | 669,045 |
| 5,008 | 14,278 | 10,098 | .. | 29,384 | 14,959 | 50,396 | 11,131 | .. | 76,486 | 51,512 | 3,345,827 | 400 | .. | 3,397,739 | 3,474,225 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | 1,715 | .. | 1,715 | .. | .. | 1,715 | .. | 1,715 | .. | 19,816 | .. | .. | 19,816 | 21,531 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 70,320 | 4,413 | .. | 74,733 | .. | 70,320 | 4,413 | .. | 74,733 | .. | 90,208 | .. | .. | 90,208 | 164,941 |
| .. | 102,792 | 21,800 | .. | 124,592 | .. | 102,792 | 21,800 | .. | 124,592 | .. | 50,488 | .. | .. | 50,488 | 175,080 |
| 487 | 87,657 | 38,320 | .. | 126,464 | 487 | 87,657 | 38,320 | .. | 126,464 | 2,200 | 150,759 | 840 | .. | 153,799 | 280,263 |
| 99 | 124,386 | 3,700 | .. | 128,185 | 3,394 | 124,386 | 3,700 | .. | 131,480 | .. | 100,403 | . | .. | 100,403 | 231,883 |
| 3 | 160,138 | 1,640 | .. | 161,781 | 231 | 160,143 | 1,640 | .. | 162,014 | 8,155 | 52,368 | .. | .. | 60,523 | 222,537 |
| .. | 251,927 | 509 | .. | 252,436 | .. | 251,927 | 509 | .. | 252,436 | .. | 723,601 | .. | .. | 723,601 | 976,037 |
| .. | 73,197 | .. | .. | 73,197 | 267 | 73,197 | 445 | .. | 73,909 | 427 | 87,722 | 60 | .. | 88,209 | 162,118 |
| .. | 48 | 6,820 | .. | 6,868 | .. | 48 | 6,820 | .. | 6,868 | .. | 156,360 | 2,684 | .. | 159,044 | 165,912 |
| 589 | 870,465 | 77,202 | .. | 948,256 | 4,379 | 870,470 | 77,647 | .. | 952,496 | 10,782 | 1,411,909 | 3.584 | .. | 1,426,275 | 2,378,771 |
| *stract.* | | | | | | | | | | | | | | | |
| 380 | 70,320 | 4,413 | .. | 75,113 | 1,502 | 70,560 | 4,413 | .. | 76,475 | 6,164 | 361,088 | .. | .. | 367,252 | 443,727 |
| 2,770 | 108 049 | 21,800 | .. | 132,619 | 3,747 | 108,880 | 22,775 | .. | 135,402 | 122 | 306,576 | .. | .. | 306,698 | 442.100 |
| 592 | 87,940 | 38,320 | .. | 126,852 | 592 | 87,940 | 38,320 | .. | 126,852 | 4,222 | 418,344 | 1,240 | .. | 423,806 | 550,658 |
| 551 | 124,386 | 3,700 | .. | 128,637 | 4,289 | 124,386 | 3,700 | .. | 132,375 | 380 | 263.541 | .. | .. | 263,921 | 396,296 |
| 494 | 160,138 | 1,640 | .. | 162,272 | 3,602 | 160,282 | 1,640 | .. | 165,524 | 8,565 | 627,479 | .. | .. | 636,044 | 801,568 |
| .. | 252,457 | 12,143 | .. | 264,600 | 120 | 252,894 | 12,143 | .. | 265,157 | 29,433 | 1,312,775 | .. | .. | 1,342,208 | 1,607,365 |
| .. | 73,197 | .. | .. | 73,197 | 2,847 | 73,488 | 468 | .. | 76 303 | 3,650 | 717,843 | 60 | .. | 721,553 | 797,856 |
| 810 | 8,256 | 6,999 | .. | 16,065 | 3,139 | 42,436 | 7,034 | .. | 52,609 | 9,758 | 769,906 | 2,684 | .. | 782,348 | 834,957 |
| 5,597 | 884.743 | 89,015 | .. | 979,355 | 19,338 | 920,866 | 90,493 | .. | 1,030,697 | 62,294 | 4,777,552 | 3,984 | .. | 4,843,830 | 5,874,527 |

Outturn (in cubic feet, solid) of Timber and Fuel.

| Division. | Timber in the rough, logs. | | | | | Timber in the rough, poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| **WESTERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT | C. FT. |
| South Canara .. | 7,647 | 5,367 | .. | .. | 13,014 | .. | .. | .. | .. | .. | 4,648 | .. | .. | .. | 4,648 |
| Malabar, North .. | 3,282 | .. | 36 | .. | 3,318 | 640 | .. | .. | .. | 640 | 83,550 | 35,199 | .. | .. | 118,749 |
| Do. South .. | 860 | 12,218 | .. | .. | 13,078 | 2,214 | .. | .. | .. | 2,214 | 1,437 | .. | .. | .. | 1,437 |
| The Nilgiris .. | 256 | 2,361 | .. | .. | 2,617 | .. | 500 | .. | .. | 500 | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | 523 | 238 | .. | .. | 761 | 169 | .. | . | .. | 169 |
| Coimbatore, North .. | 477 | .. | .. | .. | 477 | .. | .. | .. | .. | .. | 6,148 | 179 | .. | .. | 6,327 |
| Do. Central .. | 2,792 | 9,818 | .. | .. | 12,610 | .. | 1,577 | .. | .. | 1,577 | .. | .. | | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | 295 | 137 | .. | .. | 432 | 14,991 | 12,465 | .. | .. | 27,456 |
| Total .. | 15,314 | 29,764 | 36 | .. | 45,114 | 3,672 | 2,452 | .. | .. | 6,124 | 110,943 | 47,843 | | .. | 158,786 |
| *II. Leased* | | | | | | | | | | | | | | | |
| Malabar, South .. | 139,501 | 6,907 | .. | .. | 146,408 | 12,580 | .. | .. | .. | 12,580 | .. | .. | .. | .. | .. |
| The Nilgiris .. | 48,736 | 42 | .. | .. | 48,778 | 2,916 | .. | .. | .. | 2,916 | .. | .. | .. | .. | .. |
| Coimbatore, South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 92,418 | 672 | .. | .. | 93,090 |
| Total .. | 188,237 | 6,949 | .. | .. | 195,186 | 15,496 | .. | .. | .. | 15,496 | 92,418 | 672 | .. | .. | 93,090 |
| *III. Reserved* | | | | | | | | | | | | | | | |
| The Nilgiris .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| South Canara .. | 538 | 153,211 | 2,048 | 36,175 | 191,972 | .. | .. | .. | .. | .. | .. | 4,185 | .. | .. | 4,185 |
| Malabar, South .. | 520 | 286 | .. | .. | 806 | .. | .. | .. | .. | .. | 233 | .. | .. | .. | 233 |
| The Nilgiris .. | .. | 9,980 | .. | .. | 9,980 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North .. | .. | 25,137 | .. | .. | 25,137 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Central .. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 1,058 | 188,614 | 2,048 | 36,175 | 227,895 | . | .. | .. | .. | .. | 233 | 4,185 | .. | .. | 4,418 |
| Grand total .. | 204,609 | 225,327 | 2,084 | 36,175 | 468,195 | 19,168 | 2,452 | .. | .. | 21,620 | 203,594 | 52,700 | .. | .. | 256,294 |
| Total, Presidency .. | 301,115 | 904,442 | 40,128 | 36,175 | 1,281,860 | 100,927 | 310,727 | 43,787 | 180,438 | 635,879 | 253,926 | 75,017 | .. | 3,698 | 332,641 |

REMARKS.—The figures are actuals except in the following cases:—

| | Factor of conversion. |
|---|---|
| *South Canara.* | |
| Outturn under all other agencies except "Government." | One tree = 25 cubic feet. |
| *South Malabar.* | |
| Reserved forests columns 7 and 28 .. .. | One teak log = 25 cubic feet. |
| Leased forests columns 2, 7 and 17 .. .. | One windblown tree = 15 cubic feet. |
| Unreserved lands column 3 .. .. .. | Teak poles are roughly calculated as per standard measurements. |
| *Kollegal.* | |
| Reserved forests columns 7 and 8 .. .. .. | Miscellaneous timber = 403 and 1,399 pieces at ·5 and ·4 cubic foot per piece. |
| Reserved forests column 17 .. .. .. | 5,138 quarters of sandalwood converted at half a cubic foot per quarter. |
| Unreserved lands column 23 .. .. .. | 13,262 cart loads converted at 10 cubic feet per cart load. |
| *Central Coimbatore.* | |
| Unreserved lands .. .. .. .. .. | The sale amount is converted into yield in proportion to seigniorage rates. |

during the year 1914-15 and Agency of Exploitation—*cont.*

| Miscellaneous. | | | | | Total Timbers. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| **CIRCLE.** | | | | | | | | | | | | | | | |
| *forests.* | | | | | | | | | | | | | | | |
| C. FT. | C FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C, FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. |
| .. | .. | .. | .. | .. | 12,295 | 5,367 | .. | .. | 17,662 | 168,556 | 791,547 | .. | .. | 960,103 | 977,765 |
| 7 | .. | .. | .. | 7 | 87,479 | 35,199 | 36 | .. | 122,714 | 16,422 | 610 | .. | .. | 17,032 | 139,746 |
| .. | .. | .. | .. | .. | 4,541 | 12,248 | .. | .. | 16,729 | .. | 175 | .. | .. | 175 | 16,904 |
| .. | .. | 140 | .. | 140 | 256 | 2,861 | 140 | .. | 3,257 | 348,551 | 17,567 | .. | .. | 366,118 | 369,375 |
| 2,569 | .. | .. | .. | 2,569 | 3,261 | 238 | .. | .. | 3,499 | 43,500 | 116,640 | .. | .. | 160,140 | 163,639 |
| 1,723 | 882 | 800 | .. | 3,405 | 8,348 | 1,061 | 800 | .. | 10,209 | 31,785 | 1,009,337 | .. | .. | 1,041,122 | 1,051,331 |
| .. | 750 | .. | .. | 750 | 2,792 | 12,145 | .. | .. | 14,937 | 8,535 | 781,749 | .. | .. | 790,284 | 805,221 |
| 2,700 | 8,850 | .. | .. | 11,550 | 17,986 | 21,452 | .. | .. | 39,438 | 240 | 278,415 | .. | .. | 278,655 | 318,093 |
| 6,999 | 10,482 | 940 | .. | 18,421 | 136,928 | 90,541 | 976 | .. | 228,445 | 617,589 | 2,996,040 | .. | .. | 3,613,629 | 3,842,074 |
| *forests.* | | | | | | | | | | | | | | | |
| 2,059 | .. | .. | .. | 2,059 | 154,140 | 6,907 | .. | .. | 161,047 | 22,560 | .. | .. | .. | 22,560 | 183,607 |
| .. | .. | .. | .. | .. | 51,652 | 42 | .. | .. | 51,694 | .. | .. | .. | .. | .. | 51,694 |
| 692 | .. | .. | .. | 692 | 93,110 | 672 | .. | .. | 93,782 | .. | .. | .. | .. | .. | 93,782 |
| 2,751 | .. | .. | .. | 2,751 | 298,902 | 7,621 | .. | .. | 306,523 | 22,560 | .. | .. | .. | 22,560 | 329,083 |
| *lands.* | | | | | | | | | | | | | | | |
| .. | .. | 217 | .. | 217 | .. | .. | 217 | .. | 217 | .. | .. | .. | .. | .. | 217 |
| *lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 538 | 157,396 | 2,048 | 36,175 | 196,157 | .. | 485,725 | 340 | .. | 486,065 | 682,222 |
| .. | .. | .. | .. | .. | 753 | 286 | .. | .. | 1,039 | .. | .. | .. | .. | .. | 1,039 |
| .. | .. | .. | .. | .. | .. | 9,980 | .. | .. | 9,980 | .. | 362 | .. | .. | 362 | 10,342 |
| .. | 25,945 | .. | .. | 25,945 | .. | 25,945 | .. | .. | 25,945 | .. | 132,620 | .. | .. | 132,620 | 158,565 |
| .. | .. | 440 | .. | 440 | .. | 25,137 | 440 | .. | 25,577 | .. | 13,919 | .. | .. | 13,919 | 39,496 |
| .. | 151,980 | .. | .. | 151,980 | .. | 151,980 | .. | .. | 151,980 | .. | 308,640 | .. | .. | 308,640 | 460,620 |
| .. | .. | 80 | .. | 80 | .. | .. | 80 | .. | 80 | .. | .. | .. | .. | .. | 80 |
| .. | 177,925 | 520 | .. | 178,445 | 1,291 | 370,724 | 2,568 | 36,175 | 410,758 | .. | 941,266 | 340 | .. | 941,606 | 1,352,364 |
| 9,750 | 188,407 | 1,677 | .. | 199,834 | 437,121 | 468,886 | 3,761 | 36,175 | 945,943 | 640,149 | 3,937,306 | 340 | .. | 4,577,795 | 5,523,738 |
| 61,590 | 2,436,404 | 135,735 | .. | 2,633,729 | 717,568 | 3,726,590 | 219,650 | 220,311 | 4,884,109 | 1,607,441 | 19,744,466 | 4,324 | 582,195 | 21,938,426 | 26,822,535 |

## ANNUAL FORM No. 77.

*Forest Department, Madras Presidency.*

## OUTTURN of Minor Forest Produce during the year 1914–15.

| Circle. | Description of produce. | Produce removed or utilised. | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free-grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | | NO. | RS. | RS. | RS. | RS. | RS. |
| Northern Circle .. | Bamboos .. .. .. .. | (a)351,783 | 6,550 | (b) 93,180 | (c) 671 | 552 | (d) ,00,963 |
| | | MDS. | | | | | |
| | Grazing and fodder grass .. | .. | .. | 1,20,502 | 16 | 1,079 | 1,21,597 |
| | Grass (tharbi, korai, etc.). .. | 24,903 | 191 | 962 | 2,762 | .. | 3,915 |
| | Tamarind, soapnuts, galnuts, nux-vomica, sheakoy, etc. | 3,021 | 6,321 | 29,804 | .. | .. | 36,125 |
| | Horns, honey, wax, resin, gum, skins, etc. | .. | .. | 777 | .. | .. | 777 |
| | Tangedu, etc., barks and fibres. | .. | .. | 6,140 | 4 | .. | 6,144 |
| | Stone, gravel, earth, etc. .. | .. | .. | 3,638 | 3 | .. | 3,641 |
| | Leaves for platters .. .. | .. | .. | 244 | .. | .. | 244 |
| | Date and palmyra leaves, stacks, etc. | 240 | 32 | 149 | .. | .. | 181 |
| | Manure leaves and thorns .. | .. | .. | 299 | .. | .. | 299 |
| | Miscellaneous, including tree-tapping and tree-owners' fees. | 3,939 | 6,300 | 51,180 | 51 | 23,570 | 81,101 |
| | Total, minor produce only .. | 32,103 | 12,844 | 2,13,695 | 2,836 | 24,649 | 2,54,024 |
| | | NO. | | | | | |
| Central Circle .. | Bamboos .. .. .. .. | 12,200 | 226 | 14,945 | 246 | .. | 15,417 |
| | Grazing and fodder grass .. | .. | .. | 2,99,154 | 1,122 | 151 | 3,00,427 |
| | Grass (thatch) and korai, etc. .. | MDS. | .. | 921 | 8 | .. | 929 |
| | Tamarind, soapnuts and gallnuts. | 9,620 | 13,347 | 47,559 | .. | .. | 60,903 |
| | Horns, honey, wax, gum, etc. | .. | .. | 884 | .. | .. | 884 |
| | Tangedu, vembadam, etc. .. | 172 | 263 | 1,65,530 | .. | .. | 1,65,793 |
| | Mica, stone, gravel, etc. .. | 3,234 | 20 | 34,061 | .. | .. | 34,081 |
| | Manure leaves, thorns, etc. .. | .. | .. | 4,354 | .. | .. | 4,354 |
| | Date, palmyra leaves, etc. .. | 1,076 | 46 | 18,062 | 190 | .. | 18,298 |
| | Miscellaneous including tree-tapping and tree-owners' fees. | 570 | 1,025 | 60,486 | .. | .. | 61,511 |
| | Total .. | 14,672 | 14,701 | 3,31,857 | 198 | .. | 3,46,756 |
| | Grand total .. | .. | 14,927 | 6,45,956 | 1,566 | 151 | 6,62,600 |
| | | NO. | | | | | |
| Southern Circle .. | Bamboos .. .. .. .. | 3,702 | 201 | 1,01,789 | 803 | .. | 1,02,293 |
| | | MDS. | | | | | |
| | Grazing and fodder grass .. | 6 | 3 | 1,92,251 | 3,337 | .. | 1,95,591 |
| | Grass (thatch, korai, etc.) .. | 666 | 8 | 3,022 | 50 | 383 | 8,463 |
| | Dammer, cardamoms, etc. .. | 8 | 81 | 5,690 | .. | .. | 5,771 |
| | Tamarind, soapnuts, gallnuts, etc. | 296 | 148 | 6,664 | .. | .. | 6,812 |
| | Horns, honey, wax, gum, etc. .. | * 0 | 4 | 762 | .. | .. | 766 |
| | Avaram, vembadam, etc., barks. | .. | .. | 14,649 | .. | .. | 14,649 |
| | Stones, gravel and earth .. | 36,680 | 57 | 14,099 | 13 | .. | 14,169 |
| | Manure leaves, thorns, etc. .. | .. | .. | 21,182 | .. | .. | 21,182 |
| | Date, palmyra leaves, etc. .. | .. | .. | 1,613 | 99 | .. | 1,712 |
| | Miscellaneous including tree-tapping fees. | 2,149 | 230 | 1,17,283 | 1,768 | 1,722 | 1,21,003 |
| | Total .. | .. | 732 | 4,84,004 | 5,570 | 2,105 | 4,92,411 |
| | *Reserved forests.* | | | | | | |
| Western Circle .. | Bamboos in number .. .. | 72,841 | 3,818 | 20,728 | 17 | .. | 24,563 |
| | Grazing and fodder grass .. | .. | .. | 84,312 | 91 | 780 | 85,183 |
| | *Other produce. (e)* | | | | | | |
| | | QRS. | | | | | |
| | Grass (thatch, korai, etc.) .. | 307 | 21 | 1,648 | 6 | .. | 1,675 |
| | Dammer, turmeric, pepper, cardamoms, etc. | 74 | 212 | 1,603 | .. | .. | 1,815 |

(a) Excludes the value of 520 bamboos belonging to Parlakimedi maliahs.
(b) Do. 69,520 do. do.
(c) Do. 100 do. do.
(d) Do. 70,140 do. do.
(e) Do. Rs. 8,564 belonging to Parlakimedi maliahs.

## Outturn of Minor Forest Produce during the year 1914–15—*cont.*

| Circle. | Description of produce. | Produce removed or utilized. | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free-grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | | QRS. | RS. | RS. | RS. | RS. | RS. |
| Western Circle—*cont.* | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | 5,388 | 5,993 | 3,520 | .. | .. | 9,513 |
| | Horns, honey, wax, gum, resin, skins, etc. | 479 | 4,650 | 5,441 | .. | .. | 10,091 |
| | Avaram, vembadam, etc., barks and fibres. | .. | .. | 3,008 | .. | .. | 3,008 |
| | Stones, gravel, earth, etc. .. | .. | .. | 1,068 | .. | .. | 1,068 |
| | Manure leaves, thorns, etc. .. | .. | .. | 463 | .. | | 463 |
| | Date and palmyra leaves .. | .. | .. | 510 | .. | .. | 510 |
| | Miscellaneous .. .. .. | 97 | 377 | 6,114 | .. | .. | 6,491 |
| | | 6,345 | 11,253 | 23,375 | 6 | .. | 34,634 |
| | Total .. | .. | 15,071 | 1,28,415 | 114 | 780 | 1,44,380 |
| | *Leased forests.* | | | | | | |
| | Bamboos in number .. .. | 25,916 | 1,555 | 551 | 21 | .. | 2,127 |
| | Grazing and fodder grass .. | .. | .. | 621 | .. | .. | 621 |
| | *Other produce.* | QRS. | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | 15 | .. | .. | 15 |
| | Dammer, turmeric, pepper, cardamoms, etc. | 2 | 4 | .. | .. | .. | 4 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | .. | .. | 5 | .. | .. | 5 |
| | Horns, honey, wax, gum, resin, skins, etc. | 44 | 230 | .. | .. | .. | 230 |
| | Stones, gravel, earth, etc. .. | .. | .. | 159 | .. | .. | 159 |
| | | 46 | 234 | 179 | .. | .. | 413 |
| | Total .. | .. | 1,789 | 1,351 | 21 | .. | 3,161 |
| | *Reserved lands.* | | | | | | |
| | *Other produce.* | | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | .. | 7 | .. | 7 |
| | *Unreserved lands.* | | | | | | |
| | Bamboos in number .. .. | .. | .. | 835 | 29 | .. | 864 |
| | *Other produce.* | QRS. | | | | | |
| | Catechu .. .. .. .. | 1,271 | 12,664 | .. | .. | .. | 12,664 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | .. | .. | 2,889 | .. | .. | 2,889 |
| | Horns, honey, wax, gum, resin, skins, etc. | .. | .. | 7 | .. | .. | 7 |
| | Avaram, vembadam, etc., barks and fibres. | .. | .. | 1,698 | .. | .. | 1,698 |
| | Stones, gravel, earth, etc. .. | .. | .. | 803 | 166 | .. | 969 |
| | Manure leaves, thorns, etc. .. | .. | .. | 14 | .. | .. | 14 |
| | Date and palmyra leaves .. | .. | .. | 29 | .. | .. | 29 |
| | Miscellaneous .. .. .. | .. | .. | 33,087 | .. | .. | 33,087 |
| | | 1,271 | 12,664 | 38,527 | 166 | .. | 51,357 |
| | Total .. | .. | 12,664 | 39,362 | 195 | .. | 52,221 |
| | *Abstract from the Circle.* | | | | | | |
| | Bamboos in number .. .. | 98,757 | 5,378 | 22,114 | 67 | .. | 27,554 |
| | Grazing and fodder grass .. | | .. | 84,933 | 91 | 780 | 85,804 |
| | Other produce .. .. | QRS. 7,662 | 24,151 | 62,081 | 179 | .. | 86,411 |
| | Grand total .. | .. | 29,524 | 1,69 128 | 337 | 780 | 1,99,769 |
| Total Presidency .. | Bamboos .. .. .. .. | NO. 440,526 | 10,795 | 2,30,642 | 1,237 | 552 | 2,43,226 |
| | Grazing and fodder grass .. | .. | 3 | 6,96,219 | 4,566 | 2,010 | 7,02,798 |
| | Other produce .. .. | MDS. 86,574 QRS. 7,662 | 52,224 | 6,77,095 | 5,127 | 25,675 | 7,60,121 |
| | Grand total, Presidency .. | .. | 63,022 | 16,03,956 | 10,930 | 28,237 | 17,06,145 |

## ANNUAL FORM No. 78.

*Forest Department, Madras Presidency.*

ACCOUNT of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1914-15.

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **TIMBER (CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjâm .. .. .. .. | (*h*) 5,315 | (*i*) 56,449 | (*j*) 61,764 | (*k*) 47,468 | (*l*) 14,296 |
| Vizagapatam .. .. .. .. | 159 | 2,331 | 2,490 | 2,422 | 68 |
| Gôdâvari, Upper .. .. .. .. | 6,470 | 54,453 | 60,923 | 57,992 | 2,931 |
| Do. Lower .. .. .. .. | 272 | 4,572 | 4,844 | 4,517 | 327 |
| Kistna .. .. .. .. .. | .. | 280 | 280 | 280 | .. |
| Kurnool, East .. .. .. .. | 1,924 | 21,916 | 23,840 | 20,930 | 2,910 |
| Do. South .. .. .. .. | 12,482 | 6,203 | 18,685 | 18,187 | 498 |
| Do. West .. .. .. .. | 10,038 | 103,825 | 113,863 | 99,222 | 14,641 |
| Total .. | 36,660 | 250,029 | 286,689 | 251,018 | 35,671 |
| *Central Circle.* | | | | | |
| Bellary .. .. .. .. .. | 751 | 2,184 | 2,935 | 2,503 | 432 |
| Anantapur .. .. .. .. .. | .. | 32 | 32 | 32 | .. |
| Guntûr .. .. .. .. .. | 36 | 234 | 270 | 270 | .. |
| Cuddapah, West .. .. .. .. | 794 | 2,696 | 3,490 | 2,382 | 1,108 |
| Do. East .. .. .. .. | 1,557 | 4,111 | 5,668 | 4,379 | 1,289 |
| Nellore .. .. .. .. .. | 321 | 398 | 719 | 393 | 326 |
| Chingleput .. .. .. .. .. | 37 | 1,396 | 1,433 | 1,369 | 64 |
| Chittoor .. .. .. .. .. | .. | 20 | 20 | 20 | .. |
| Total .. | 3,496 | 11,071 | 14,567 | 11,348 | 3,219 |
| *Southern Circle.* | | | | | |
| Vellore, North .. .. .. .. | 1 | 1,502 | 1,503 | 1,483 | 20 |
| Do. South .. .. .. .. | 5,045 | 3,747 | 8,792 | 4,888 | 3,904 |
| Arcot, South .. .. .. .. | 31 | 592 | 623 | 31 | 592 |
| Salem, North .. .. .. .. | 93 | 4,289 | 4,382 | 4,048 | 334 |
| Do. South .. .. .. .. | 440 | 3,602 | 4,042 | 3,280 | 762 |
| Trichinopoly .. .. .. .. | * 42 | 120 | 162 | 123 | 39 |
| Madura .. .. .. .. | * 1,145 | 2,347 | 3,492 | 2,342 | 1,150 |
| Tinnevelly .. .. .. .. | ● 155 | 3,139 | 3,294 | 2,882 | 412 |
| Total .. | 6,952 | 19,338 | 26,290 | 19,077 | 7,213 |
| *Western Circle.* | | | | | |
| South Canara .. .. .. .. | 8,263 | 12,833 | 21,096 | 6,888<br>(*a*) 2,377<br>(*b*) 298 | 11,533 |
| Malabar, North .. .. .. .. | 45,463<br>(*f*) + 912 | 87,479 | 133,854 | 97,950<br>(*a*) 3,352<br>(*b*) 14,182<br>(*c*) 385<br>(*e*) 2,129 | 15,856 |
| Do. South .. .. .. .. | 84,070 | 159,404 | 243,474 | 71,373<br>(*a*) 1,927<br>(*b*) 474 | 169,700 |
| The Nilgiris .. .. .. .. | 869 | 51,908 | 52,777 | 34,697<br>(*b*) 464 | 17,616 |
| Kollegal .. .. .. .. .. | 894<br>(*f*) — 2 | 3,261<br>(*c*) 385 | 4,538 | 876<br>(*d*) 2,496<br>(*a*) 326<br>(*b*) 37 | 803 |
| Coimbatore North .. .. .. | 5,309 | 8,348<br>(*d*) 2,496 | 16,153 | 8,580<br>(*a*) 2,407<br>(*b*) 768 | 4,398 |
| Do. Central .. .. .. | 839 | 2,792 | 3,631 | 2,373<br>(*b*) 20 | 1,238 |
| Do. South .. .. .. | 300,495 | 111,096 | 411,591 | 23,305<br>(*a*) 2,394<br>(*b*) 2,298 | 383,594 |
| Total .. | 447,112 | 440,002 | 887,114 | 282,376 | 604,738 |
| Grand total .. | 494,220 | 720,440 | 1,214,660 | 563,819 | 650,841 |

* Revised figure furnished by the Collector.
(*a*) Used departmentally.
(*b*) Written off the accounts.
(*c*) Transferred from North Malabar to Kollegal.
(*d*) Transferred from Kollegal to North Coimbatore.
(*e*) Transferred from Central Coimbatore to South Coimbatore.
(*f*) Deficit in conversion or re-measurement.
(*h*) Excludes 19 cubic feet belonging to Parlâkimedi maliahs.
(*i*) Do. 817 do. do. do.
(*j*) Do. 836 do. do. do.
(*k*) Do. 717 do. do. do.
(*l*) Do. 119 do. do do.

Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1914-15—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **FUEL (CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | 1,189 | 10,980 | 12,169 | 11,119 | 1,050 |
| Vizagapatam | *2,650 | 105,100 | 107,750 | 107,278 | 472 |
| Gódávari, Upper | 2,869 | 2,000 | 4,869 | 2,468 | 2,401 |
| Do. Lower | 3,645 | 39,631 | 43,276 | 43,276 | .. |
| Kistna | .. | 47,600 | 47,600 | 47,600 | .. |
| Kurnool, East | .. | 261 | 261 | 261 | .. |
| Do. South | 341,105 | 65,974 | 407,079 | 242,895 | 164,184 |
| Do. West | 46,613 | 597,389 | 644,002 | 482,444 | 161,558 |
| Total .. | 398,071 | 868,935 | 1,267,006 | 937,341 | 329,665 |
| *Central Circle.* | | | | | |
| Bellary | 1,950 | 5,105 | 7,055 | 6,735 | 320 |
| Anantapur | 125 | .. | 125 | 125 | .. |
| Guntûr | 2,610 | 295 | 2,905 | 2,905 | .. |
| Cuddapah, West | 12,400 | 1,400 | 13,800 | 9,500 | 4,300 |
| Do. East | 31,086 | 14,224 | 45,310 | 42,484 | 2,826 |
| Nellore | 7,221 | 13,723 | 20,944 | 17,265 | 3,679 |
| Chingleput | .. | 981 | 981 | 981 | .. |
| Chittoor | .. | 335 | 335 | 335 | .. |
| Total .. | 55,392 | 36,063 | 91,455 | 80,330 | 11,125 |
| *Southern Circle.* | | | | | |
| Vellore, North | 1,732 | 6,164 | 7,896 | 7,856 | 40 |
| Do. South | 17,707 | 122 | 17,829 | 11,529 | 6,300 |
| Arcot, South | 849 | 4,222 | 5,071 | 4,921 | 150 |
| Salem, North | .. | 380 | 380 | 380 | .. |
| Do. South | .. | 8,565 | 8,565 | 8,460 | 105 |
| Trichinopoly | 527 | 29,433 | 29,960 | 22,520 | 7,440 |
| Madura | 240 | 3,650 | 3,890 | 3,890 | .. |
| Tinnevelly | 996 | 9,758 | 10,754 | 6,629 | 4,125 |
| Total .. | 22,051 | 62,294 | 84,345 | 66,185 | 18,160 |
| *Western Circle.* | | | | | |
| South Canara | 373,367 | 168,556 | 541,923 | 441,007 (*a*) 2,349 (*b*) 14,149 | 84,418 |
| Malabar, North | 18,308 (*d*) + 19 | 16,422 | 34,749 | 13,167 (*b*) 290 (*c*) 12 | 21,280 |
| Do. South | .. | 22,560 | 22,560 | 16,396 | 6,164 |
| The Nilgiris | 185,503 | 348,551 | 534,054 | 319,697 (*b*) 1,152 | 213,205 |
| Kollegal | 242,490 (*d*) + 2,100 | 43,500 | 288,090 | 183,110 | 104,980 |
| Coimbatore, North | 103,245 | 31,785 | 135,030 | 106,485 | 28,545 |
| Do. Central | 400 | 8,535 | 8,935 | 7,253 | 1,682 |
| Do. South | 46,700 | 240 | 46,940 | 38,275 (*b*) 7,510 | 1,155 |
| Total .. | 972,132 | 640,149 | 1,612,281 | 1,150,852 | 461,429 |
| Grand total .. | 1,447,646 | 16,07,441 | 30,55,087 | 22,34,708 | 820,379 |

* The difference in opening balance is due to revised figures furnished by Collector.

(*a*) Used departmentally.
(*b*) Written off the accounts.
(*c*) Deficit in conversion or re-measurement.
(*d*) Added or deducted as per revised figures furnished by Collectors.

Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1914–15—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **BAMBOOS (NUMBER).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjām | (*e*) 2,205 | 9,820 | (*e*) 12,025 | (*e*)11,425 | 600 |
| Vizagapatam | .. | 245,375 | 245,375 | 244,000 | 1,375 |
| Gōdāvari, Upper | 1,825 | 25,750 | 27,575 | 27,150 | 425 |
| Do. Lower | .. | 26,820 | 26,820 | 26,820 | .. |
| Kistna | .. | .. | .. | .. | .. |
| Kurnool, East | 200 | 3,653 | 3,853 | 3,367 | 486 |
| Do. South | 92 | 35,015 | 35,107 | 33,507 | 1,600 |
| Do. West | .. | 5,350 | 5,350 | 5,350 | .. |
| Total .. | 4,322 | 351,783 | 356,105 | 351,619 | 4,486 |
| *Central Circle.* | | | | | |
| Bellary | 75 | 1,650 | 1,725 | 1,397 | 328 |
| Anantapur | .. | .. | .. | .. | .. |
| Guntūr | .. | .. | .. | .. | .. |
| Cuddapah, West | .. | .. | .. | .. | .. |
| Do. East | .. | 9,630 | 9,630 | 8,320 | 1,310 |
| Nellore | .. | .. | .. | .. | .. |
| Chingleput | .. | .. | .. | .. | .. |
| Chittoor | .. | 920 | 920 | 920 | .. |
| Total .. | 75 | 12,200 | 12,275 | 10,637 | 1,638 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. |
| Arcot, South | .. | 1,050 | 1,050 | 1,050 | .. |
| Salem, North | .. | 120 | 120 | 120 | .. |
| Do. South | .. | 650 | 650 | 350 | 300 |
| Trichinopoly | .. | .. | .. | .. | .. |
| Madura | .. | .. | .. | .. | .. |
| Tinnevelly | 459 | 1,882 | 2,341 | 2,341 | .. |
| Total .. | 459 | 3,702 | 4,161 | 3,861 | 300 |
| *Western Circle.* | | | | | |
| South Canara | 2,624 | 3,810 | 6,434 | 4,059<br>(*a*) 175<br>(*b*) 764 | 836 |
| Malabar, North | 4,760 | 23,604 | 28,364 | 21,859<br>(*a*) 640<br>(*b*) 1,195<br>(*c*) 350 | 4,320 |
| Do. South | 12,517 | 45,741 | 58,258 | 30,047<br>(*a*) 3,325<br>(*b*) 247 | 24,639 |
| Kollegal | 37,008<br>(*d*) + 100 | 20,957 | 58,065 | 39,341<br>(*a*) 110 | 18,614 |
| Coimbatore, Central | .. | 4,645 | 4,645 | 4,435 | 210 |
| Total .. | 56,409 | 98,757 | 155,166 | 106,547 | 48,619 |
| Grand total .. | 61,265 | 466,442 | 527,707 | 472,664 | 55,043 |

(*a*) Used departmentally.
(*b*) Written off the accounts.
(*c*) Deficit in conversion or re-measurement.
(*d*) Added or deducted as per revised figures furnished by Collectors.
(*e*) Excludes 1,764 bamboos belonging to Parlakimedi maliahs.

Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1914-15—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **MINOR PRODUCE (MAUNDS OF 28 LBS.).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjām | 206 | 166 | 372 | 369 | 3 |
| Vizagapatam | .. | 5,499 | 5,499 | 66 | 5,433 |
| Gōdavari, Upper | 39,796 | 9,468 | 49,264 | 9,101 | 40,163 |
| Do. Lower | 71 | 10,178 | 10,249 | 10,249 | .. |
| Kistna | 130 | 451 | 581 | 379 | 202 |
| Kurnool, East | 1,701 | 3,095 | 4,796 | 3,020 | 1,776 |
| Do. South | 147 | .. | 147 | 147 | .. |
| Do. West | 482 | 3,246 | 3,728 | 3,008 | 720 |
| Total | 42,533 | 32,103 | 74,636 | 26,339 | 48,297 |
| *Central Circle.* | | | | | |
| Bellary | 1 | .. | 1 | 1 | .. |
| Anantapur | 10 | 7 | 17 | 9 | 8 |
| Guntūr | 5,215 | 4,143 | 9,358 | 8,493 | 865 |
| Cuddapah, West | .. | .. | .. | .. | .. |
| Do. East | 1,775 | .. | 1,775 | 1,769 | 6 |
| Nellore | 4,309 | 10,522 | 14,831 | 13,947 | 884 |
| Chingleput | 92 | .. | 92 | 92 | .. |
| Chittoor | .. | .. | .. | .. | .. |
| Total | 11,402 | 14,672 | 26,074 | 24,311 | 1,763 |
| *Southern Circle.* | | | | | |
| Vellore, North | 294 | 575 | 869 | 624 | 245 |
| Do. South | 3 | .. | 3 | 3 | .. |
| Arcot, South | .. | 1,820 | 1,820 | 1,327 | 493 |
| Salem, North | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. |
| Trichinopoly | 8 | 358 | 366 | 38 | 328 |
| Madura | 7 | .. | 7 | 7 | .. |
| Tinnevelly | .. | 37,052 | 37,052 | 37,049 | 3 |
| Total | 312 | 39,805 | 40,117 | 39,048 | 1,069 |
| *Western Circle.* | | | | | |
| South Canara | 1,179 | 1,271 | 2,450 | 1,551 (*b*) 899 | .. |
| Malabar, North | 1 | 315 | 316 | 311 | 5 |
| The Nilgiris | 23 | 336 | 359 | 355 (*b*) 3 | 1 |
| Kollegal | 1,549 (*d*) — 41 | 1,780 | 3,288 | 1,435 (*b*) 19 | 1,834 |
| Coimbatore, North | 2,880 | 3,761 | 6,641 | 4,961 (*b*) 83 | 1,597 |
| Do. Central | 133 | 8 | 141 | 133 (*c*) 3 | 5 |
| Do. South | 105 | 191 (*c*) 3 | 299 | 132 (*a*) 16 (*b*) 49 | 102 |
| Total | 5,829 | 7,665 | 13,494 | 9,950 | 3,544 |
| Grand total | 60,076 | 94,245 | 154,321 | 99,648 | 54,673 |

(*a*) Used departmentally.
(*b*) Written off the accounts
(*c*) Transferred from Central Coimbatore to South Coimbatore.
(*d*) Added or deducted as per revised figures furnished by Collectors.

## ANNUAL FORM No. 79.

*Forest Department, Madras Presidency.*

STATEMENT showing the value of timber and other produce at sale depôts for 1914–15.

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year |
| | *Northern Circle.* | | | Rs. | | | Rs. | Rs. | Rs. |
| Ganjām | Timber | .. | (a) 3,217 | (b) 2,033 | .. | (c) 9,025 | (d 6,209 | (e) 4,176 | .. |
| | Fuel | .. | 96 | 3 | .. | .. | .. | .. | 3 |
| | Bamboos | (f)2,205 | .. | (g) 16 | .. | .. | .. | .. | 16 |
| | Minor produce | MDS. 127 | .. | 1,476 | MDS. 3 | .. | 36 | .. | 1,440 |
| Vizagapatam. | Timber | .. | 143 | 48 | .. | 68 | 20 | .. | 28 |
| | Fuel | .. | * 152 | 19 | .. | 472 | 59 | 40 | .. |
| | Bamboos | .. | .. | .. | 1,375 | .. | 32 | 32 | .. |
| | Minor produce | .. | .. | .. | | .. | .. | . | .. |
| Gōdāvari, Upper. | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | .. | .. | .. | .. | .. | .. | . |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | .. | .. | .. | .. | .. | .. | .. | .. |
| Gōdāvari, Lower. | Timber | .. | .. | . | .. | .. | .. | .. | .. |
| | Fuel | .. | .. | . | .. | .. | .. | .. | .. |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | .. | .. | .. | .. | .. | .. | .. | .. |
| Kistna | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | .. | .. | .. | . | .. | .. | .. |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East. | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos | | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | .. | .. | .. | .. | .. | .. | .. | . |
| Kurnool, South. | Timber | .. | 12,482 | 9,361 | .. | 498 | 527 | .. | 8,834 |
| | Fuel | .. | 341,105 | 15,792 | .. | 164,184 | 6,552 | .. | 9,240 |
| | Bamboos | 92 | .. | 2 | 1,600 | .. | 21 | 19 | .. |
| | Minor produce | MDS. 147 | .. | 526 | .. | .. | .. | .. | 526 |
| Kurnool, West. | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | 27 | 10 | .. | 1,469 | 275 | 265 | .. |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | MDS. 345 | .. | 77 | MDS. 687 | .. | 288 | 211 | .. |
| | *Central Circle.* | | | | | | | | |
| Bellary | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | 1,950 | 56 | .. | .. | .. | .. | 56 |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | .. | .. | .. | .. | .. | .. | .. | . |
| Anantapur | Timber | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel | .. | 125 | 8 | .. | .. | .. | .. | 3 |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | MDS. 10 | .. | 40 | .. | .. | .. | .. | 40 |

* The difference in opening balance is due to revised figures furnished by Collector.

(a) Excludes 19 cubic feet of timber belonging to Parlākimedi maliahs.
(b) Do. Rs. 28 being value of 19 cubic feet timber belonging to Parlākimedi maliahs.
(c) Do. 120 cubic feet of timber belonging to Parlākimedi maliahs.
(d) Do. Rs. 166 do. do.
(e) Do. Rs. 138 do. do.
(f) Do. 1,764 bamboos belonging to Parlākimedi maliahs.
(g) Do. Rs. 42-8-0 being the value of bamboos belonging to Parlākimedi maliahs.

Statement showing the value of timber and other produce at sale depôts for 1914-15—*cont.*

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cubic feet. | Value | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Central Circle*—cont. | | | Rs. | | | Rs. | Rs. | Rs. |
| Guntûr .. | Timber .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 2,135 | .. | 267 | .. | .. | .. | .. | 267 |
| Cuddapah, West. | Timber .. .. | .. | 794 | 794 | .. | .. | .. | .. | 794 |
| | Fuel .. .. | .. | 10,000 | 200 | .. | .. | .. | .. | 200 |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, East. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 1,436 | .. | 370 | .. | .. | .. | .. | 370 |
| Nellore .. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 3,949 | .. | 1,268 | MDS. 884 | .. | 720 | .. | 548 |
| Chingleput. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. | Timber .. | .. | 81 | 13 | .. | .. | .. | .. | 13 |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 45 | .. | 28 | .. | .. | .. | .. | 28 |
| | *Southern Circle.* | | | | | | | | |
| Vellore, North. | Timber .. .. | .. | 1 | 1 | .. | 20 | 4 | 3 | .. |
| | Fuel .. .. | .. | 838 | 73 | .. | 40 | 2 | .. | 71 |
| | Minor produce .. | .. | .. | .. | MDS. 191 | .. | 84 | 84 | .. |
| Vellore, South. | Timber .. .. | .. | 4,553 | 75,776 | .. | 2,939 | 47,024 | .. | 28,752 |
| | Fuel .. .. | .. | 807 | 50 | .. | 400 | 25 | .. | 25 |
| | Minor produce .. | MDS. 3 | .. | 12 | .. | .. | .. | .. | 12 |
| Arcot, South .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North. | Timber .. .. | .. | 93 | 850 | .. | 334 | 1,272 | 422 | .. |
| Salem, South. | Timber .. .. | .. | 440 | 524 | .. | 762 | 956 | 432 | .. |
| | Fuel .. .. | .. | .. | .. | .. | 105 | 2 | 2 | .. |
| | Bamboos .. | .. | .. | .. | 300 | .. | 7 | 7 | .. |
| Trichinopoly *cum* Tanjore. | Timber .. .. | .. | * 42 | 406 | .. | 39 | 589 | 133 | .. |
| | Fuel .. .. | .. | 311 | 86 | .. | 7,440 | 275 | 239 | .. |
| | Minor produce .. | MDS. 7 | .. | 1 | MDS. 328 | .. | 155 | 154 | .. |
| Madura .. | Timber .. .. | .. | 1,061 | 398 | .. | 1,150 | 424 | 26 | .. |
| | Fuel .. .. | .. | 240 | 15 | .. | .. | .. | .. | 15 |
| | Minor produce .. | MDS. 7 | .. | 19 | .. | .. | .. | .. | 19 |
| Tinnevelly *cum* Ramnad. | Timber .. .. | .. | 142 | 188 | .. | 412 | 784 | 596 | .. |
| | Fuel .. .. | .. | 1,016 | 56 | .. | 4,125 | 237 | 181 | .. |
| | Bamboos .. | (*a*) 459 | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. (*b*) | .. | 4 | MDS. 8 | .. | 11 | 7 | .. |

* Revised figure as per correct factor of conversion.

(*a*) Valueless being rotten. (*b*) Less than half a maund.

Statement showing the value of timber and other produce at sale depôts for 1914-15—*cont.*

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Western Circle.* | | | Rs. | | | Rs. | Rs. | Rs. |
| South Canara. | Timber | .. | 1,190 | 1,287 | .. | 2,345 | 1,890 | 603 | .. |
| | Fuel | .. | 170,971 | 17,423 | .. | .. | .. | .. | 17,423 |
| | Bamboos | 449 | .. | 49 | .. | .. | .. | .. | 49 |
| North Malabar. | Timber | .. | 18,877 | 20,913 | .. | 1,401 | 1,009 | .. | 19,904 |
| | Fuel | .. | 11,520 | 792 | .. | 2,240 | 196 | .. | 596 |
| | Bamboos | 3,565 | .. | 321 | 1,441 | .. | 130 | .. | 191 |
| | Minor produce | .. | .. | .. | QRS. 5 | .. | 228 | 228 | .. |
| South Malabar. | Timber | .. | .. | .. | .. | 75 | 94 | 94 | .. |
| The Nilgiris. | Timber | .. | 847 | 256 | .. | 330 | 161 | .. | 95 |
| | Fuel | .. | 53,291 | 4,260 | .. | 28,958 | 2,461 | .. | 1,799 |
| Kollegal | Timber | .. | 428 | 285 | .. | 660 | 360 | 75 | .. |
| | Fuel | .. | 240 | 5 | .. | .. | .. | .. | 5 |
| | Bamboos | 14,865 | .. | 1,345 | 10,052 | .. | 758 | .. | 587 |
| | Minor produce | QRS. 1,412 | .. | 2,190 | QRS. 1,304 | .. | 1,530 | .. | 660 |
| North Coimbatore. | Timber | .. | 1,253 | 23,422 | .. | 849 | 5,713 | .. | 17,709 |
| | Minor produce | QRS. 2,841 | .. | 3,944 | QRS. 1,597 | .. | 2,243 | .. | 1,701 |
| Central Coimbatore. | Minor produce | .. | .. | .. | QRS. 5 | .. | 401 | 401 | .. |
| South Coimbatore. | Timber | | 69,624 | 86,028 | .. | 240 | 295 | .. | 12,024 |
| | | | (a)—62,515 | —73,709 | | | | | |
| | Fuel | .. | 43,720 | 897 | .. | .. | .. | .. | 897 |
| | Minor produce | QRS. 3 | .. | 1 | .. | .. | .. | .. | 1 |
| | ABSTRACT. | | | | | | | | |
| Northern Circle. | Timber | .. | 15,842 | 11,442 | .. | 9,591 | 6,756 | .. | 4,686 |
| | Fuel | .. | 341,380 | 15,824 | .. | 166,125 | 6,886 | .. | 8,938 |
| | Bamboos | 2,297 | .. | 18 | 2,975 | .. | 53 | 35 | .. |
| | Minor produce | MDS. 619 | .. | 2,079 | MDS. 640 | .. | 324 | .. | 1,755 |
| | Total value | .. | .. | 29,363 | .. | .. | 14,019 | .. | 15,344 |
| Central Circle. | Timber | .. | 875 | 807 | .. | .. | .. | .. | 807 |
| | Fuel | .. | 12,075 | 264 | .. | .. | .. | .. | 264 |
| | Bamboos | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce | MDS. 7,575 | .. | 1,973 | MDS. 884 | .. | 720 | .. | 1,253 |
| | Total | .. | .. | 3,044 | .. | .. | 720 | .. | 2,324 |
| Southern Circle. | Timber | .. | 6,332 | 78,143 | .. | 5,656 | 51,053 | .. | 27,090 |
| | Fuel | .. | 3,212 | 230 | .. | 12,110 | 541 | 311 | .. |
| | Bamboos | 459 | .. | .. | 300 | .. | 7 | 7 | .. |
| | Minor produce | MDS. 17 | .. | 36 | MDS. 522 | .. | 250 | 214 | .. |
| | Total value | .. | .. | 78,409 | .. | .. | 51,851 | .. | 26,558 |
| Western Circle | Timber | .. | 29,704 | 58,482 | .. | 5,900 | 9,522 | .. | 48,960 |
| | Fuel | .. | 279,742 | 23,377 | .. | 31,198 | 2,657 | .. | 20,720 |
| | Bamboos | 18,879 | .. | 1,715 | 11,493 | .. | 888 | .. | 827 |
| | Minor produce | QRS. 4,256 | .. | 6,135 | QRS. 2,911 | .. | 4,402 | .. | 1,733 |
| | Total value | .. | .. | 89,709 | .. | .. | 17,469 | .. | 72,240 |
| | Grand total | .. | .. | 200,525 | .. | .. | 84,059 | . | 1,16,466 |

(a) Stock in forest depôts wrongly included in the last year's return.

ANNUAL FORM No. 80.

*Forest Department, Madras Presidency.*

SUMMARY of Revenue of the different districts for the Forest year 1914–15.

ANNUAL

*Forest Department*

SUMMARY of Revenue of the different districts

| Budget heads. | Northern Circle. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| *Receipts.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | |
| (*a*) Timber | 6 | 23,516 | 1,711 | 9,451 | 113 | .. | 3,171 |
| (*b*) Firewood | 52 | 110 | 4,032 | 92 | 3,898 | 12 | 1 |
| (*c*) Bamboos | .. | 8 | 5,867 | 2 | 1 | .. | .. |
| (*d*) Sandalwood | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other mino produce | .. | 1,704 | 40 | 118 | 72 | 140 | 6,257 |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | |
| (*a*) Timber | 8 | 30,305 | 5,314 | 4,308 | 52,754 | 8,509 | 3,734 |
| (*b*) Firewood and charcoal | 2 | 21,184 | 1,867 | 1,241 | 58,275 | 46,558 | 628 |
| (*c*) Bamboos | .. | 6,211 | 8,109 | 9,941 | 45,125 | 3,514 | 302 |
| (*d*) Grazing and fodder grass | .. | 11,461 | 5,255 | 9,269 | 14,025 | 12,788 | 31,872 |
| (*e*) Other produce | .. | 2,619 | 11,005 | 854 | 28,610 | 9,727 | 1,448 |
| (*f*) Tree-owner's fees | .. | 1,611 | 576 | .. | 4,718 | 7,729 | 1,212 |
| (*g*) Other items | .. | .. | .. | .. | .. | .. | .. |
| (*h*) Commutation fees | .. | .. | .. | 28 | .. | .. | .. |
| III. Confiscated drift and waifwood | .. | 188 | 91 | 1,118 | 484 | 106 | 831 |
| IV. Revenue from forests not managed by Government— | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | |
| (*a*) Fines and forfeitures | .. | 1,880 | 2,121 | 509 | 4,443 | 2,134 | 4,974 |
| (*b*) Other sources | 23 | 2,073 | 288 | 1,102 | 6,691 | 1,109 | 639 |
| Total, Receipts | 91 | (*a*) 1,02,870 | 46,276 | 38,033 | 2,19,204 | 92,326 | 55,064 |

| Budget heads. | Southern Circle. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Direction. | Working plans officer, Southern Circle. | Vellore, North. | Vellore, South. | Arcot, South. | Salem, North. | Salem, South. |
| | (22) | (23) | (24) | (25) | (26) | (27) | (28) |
| *Receipts.* | RS. | | RS. | RS. | RS. | RS. | RS. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | |
| (*a*) Timber | .. | .. | 36 | 511 | 68 | 2,860 | 791 |
| (*b*) Firewood and charcoal | .. | .. | 223 | 59 | 800 | 38 | 23 |
| (*c*) Bamboos | .. | .. | .. | .. | 54 | 21 | .. |
| (*d*) Sandalwood | .. | .. | .. | *65,199 | .. | 29 | 2 |
| (*e*) Grass and other miner produce | .. | .. | 104 | .. | 34 | .. | .. |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | |
| (*a*) Timber | .. | .. | 12,992 | 11,407 | 12,250 | 8,021 | 10,034 |
| (*b*) Firewood and charcoal | .. | .. | 23,743 | 14,440 | 1,83,553 | 6,872 | 15,445 |
| (*c*) Bamboos | .. | .. | 13,994 | 36,886 | 237 | 15,363 | 22,127 |
| (*d*) Grazing and fodder grass | .. | .. | 23,753 | 30,419 | 29,332 | 32,145 | 20,502 |
| (*e*) Other produce | 557 | .. | 21,616 | 18,055 | 22,691 | 28,266 | 24,876 |
| (*f*) Rents for trees tapped. | .. | .. | 5,962 | 1,715 | 1,121 | 1,035 | 237 |
| (*g*) Other items | .. | .. | .. | .. | 42 | 621 | .. |
| (*h*) Commutation fees | .. | .. | .. | .. | .. | .. | 448 |
| III. Confiscated drift and waif-wood | .. | .. | 79 | 403 | 249 | 223 | 92 |
| IV. Revenue from forest not managed by Government— | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | |
| (*a*) Fines and forfeitures | .. | .. | 14,317 | 12,310 | 22,659 | 7,849 | 11,698 |
| (*b*) Other sources | 5 | | 838 | 837 | 685 | 2,243 | 4,876 |
| Total, receipts | 562 | .. | 1,17,657 | 1,92,241 | 2,73,775 | 1,05,586 | 1,21,151 |

(*a*) Excludes Rs. 15,520 being revenue realized in Parlakimedi Maliahs.

* Includes sale-proceeds of sandalwood of other districts as shown below :—
Vellore, North, Rs. 20.
Trichinopoly, Rs. 244.

NOTE.—(*Southern Circle*).—Revenue under "Direction" is distributed as follows:—
II. (*e*) Vellore, North, Rs. 557.
V. (*b*) Vellore, South, Rs. 4.
Madura, Re. 1.

FORM No. 80.

*Madras Presidency.*

for the Forest year 1914–15.

| Kurnool, South. (9) | Kurnool, West. (10) | Total. (11) | Central Circle. Direction. (12) | Bellary. (13) | Anantapur. (14) | Guntur. (15) | Cuddapah, West. (16) | Cuddapah, East. (17) | Nellore. (18) | Chingleput. (19) | Chittoor. (20) | Total. (21) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RS. | RS. | RS. | RS. | RS. | RS. | RS | RS. | RS. | RS. | RS. | RS. | RS. |
| 8,698 | 19,834 | 66,500 | .. | 309 | .. | 4 | 544 | 1,707 | 11 | 39 | 15 | 2,629 |
| 9,936 | 12,641 | 30,774 | .. | 317 | 5 | 55 | 73 | 1,210 | 3,230 | 46 | 73 | 5,009 |
| 84 | 5 | 5,967 | .. | 1 | 2 | .. | .. | 3 | .. | .. | .. | 6 |
| .. | .. | .. | .. | 364 | .. | .. | .. | .. | .. | .. | .. | 364 |
| 117 | 1,586 | 10,034 | .. | 1 | .. | 156 | .. | 1,054 | 14,563 | .. | 15 | 15,819 |
| 15,454 | 203 | 1,20,589 | .. | 12,406 | 16,261 | 12,913 | 6,584 | 14,117 | 8,638 | 9,028 | 12,440 | 92,387 |
| 8,141 | 12,130 | 1,50,026 | .. | 9,732 | 3,315 | 33,434 | 9,416 | 20,664 | 1,09,217 | 14,034 | 15,720 | 2,15,532 |
| 25,009 | 11,630 | 1,09,841 | .. | 212 | .. | | 3,245 | 5,081 | 7 | 92 | 4,610 | 13,247 |
| 8,975 | 26,395 | 1,20,040 | .. | 46,788 | 34,001 | 84,774 | 17,878 | 18,181 | 61,901 | 13,236 | 22,395 | 2,99,154 |
| 6,838 | 11,163 | 72,259 | .. | 48,863 | 97,023 | 17,917 | 14,659 | 7,960 | 27,022 | 12,619 | 44,928 | 2,70,891 |
| 2,335 | 13,774 | 31,950 | .. | 18,493 | 13,124 | 5,396 | 1,686 | 1,861 | 4 630 | 3,675 | 2,542 | 51,407 |
| .. | .. | .. | .. | .. | .. | .. | .. | 228 | .. | .. | .. | 228 |
| .. | .. | 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2,022 | 673 | 5,513 | .. | 174 | 346 | 230 | 703 | 816 | 716 | 92 | 137 | 3,217 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7,136 | 7,762 | 30,959 | .. | 10,103 | 10,475 | 18,682 | 5,615 | 9,521 | 14,454 | 6,802 | 7,389 | 83,041 |
| 1,702 | 2,486 | 15,913 | 321 | 848 | 344 | 1,301 | 484 | 3,197 | 29,124 | 773 | 797 | 37,189 |
| 96,447 | 1,20,082 | 7,70,393 | 321 | 1,48,611 | 1,74,896 | 1,74,862 | 60,890 | 85,630 | 2,73,513 | 60,336 | 1,11,061 | 10,90,120 |

| Trichinopoly *cum* Tanjore. (29) | Madura. (30) | Tinnevelly *cum* Ramnad. (31) | Total. (32) | Western Circle. Direction (33) | South Canara. (34) | North Malabar. (35) | South Malabar. (36) | The Nilgiris. (37) | Kollegal. (38) | North Coimbatore. (39) | Central Coimbatore. (40) | South Coimbatore. (41) | Total. (42) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| .. | 16 | 402 | 4,684 | .. | 3,253 | 76,437 | 1,14,719 | 10,224 | 163 | 398 | .. | 36,097 | 2,41,291 |
| 925 | 199 | 171 | 2,438 | .. | 30,185 | 869 | 587 | 27,519 | 5,149 | 3,196 | 161 | 583 | 68,239 |
| .. | .. | 42 | 117 | .. | 430 | 1,736 | 2,748 | .. | 913 | .. | 54 | .. | 5,881 |
| 86 | .. | .. | 65,316 | 95,749 | 11,987 | .. | .. | 2,730 | .. | 6 | 10 | .. | 1,10,482 |
| 3 | 176 | 143 | 460 | 39 | 13,193 | 65 | .. | 870 | 2,999 | 6,114 | 642 | 961 | 24,883 |
| 15,761 | 4,688 | 2,663 | 77,816 | .. | 20,502 | 16,702 | 3,558 | 1,258 | 8,880 | 4,040 | 4,852 | 1,628 | 61,420 |
| 1,24,722 | 26,426 | 73,425 | 4,68,626 | .. | 21,660 | 5 | 9 | 2,415 | 1,078 | 8,975 | 26,882 | 4,577 | 65,601 |
| 2,287 | 2,610 | 417 | 1,03,921 | .. | 2,708 | 135 | 983 | 2,360 | 370 | 7,825 | 5,115 | 804 | 20,300 |
| 27,638 | 21,604 | 6,858 | 1,92,251 | .. | 11,165 | 2,568 * −44 | 1 | 10,065 | 21,367 | 29,111 | 7,105 | 3,551 | 84,889 |
| 22,517 | 33,723 | 25,923 | 1,98,254 | 330 | 29,012 | 3,910 * + 44 | 2,280 | 2,713 | 3,819 | 4,067 | 8,706 | 3,725 | 58,606 |
| 209 | .. | .. | 10,279 | .. | 1,531 | .. | .. | .. | 22 | .. | .. | .. | 1,553 |
| .. | .. | .. | 663 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| .. | .. | .. | 448 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 272 | 815 | 1,354 | 3,487 | .. | 4,174 | 686 | 10 | 12 | 80 | 122 | 529 | 553 | 6,166 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15,864 | 10,940 | 6,668 | 1,02,305 | .. | 11,777 | 32 | 314 | 786 | 2,416 | 3,799 | 4,806 | 1,891 | 25,821 |
| 1,483 | 1,383 | 1,836 | 14,186 | 1,05,616 | 7,360 | 8,715 | 2,938 | 4,320 | 1,472 | 2,655 | 1,739 | 1,741 | 1,36,956 |
| 2,11,797 | 1,02,586 | 1,19,902 | 12,45,251 | 2,01,734 | 1,68,937 | 1,11,850 | 1,28,147 | 65,272 | 49,128 | 70,308 | 60,601 | 56,111 | 9,12,088 |

* Adjustment of the erroneous credit referred to in the return for 1913–14.

(*Western Circle*).—The Revenue under Direction is distributed as follows :—

I (*d*) Nilgiris, Rs. 450 ; Kollegal, Rs. 42,622 ; North Coimbatore, Rs. 52,677.
I (*e*) South Malabar, Rs. 14 ; North Vellore, Southern Circle, Rs. 25.
II (*e*) Relates to South Coimbatore.

V (*b*) North Malabar, Rs. 2,077 ; South Malabar, Rs. 7,025 ; Nilgiris, Rs. 27,242 ; Kollegal, Rs. 5 ; North Coimbatore, Rs. 6 ; South Coimbatore, Rs. 69,020 ; Direction, Rs. 241.
South Malabar V (*b*) includes Rs. 1,000 relating to North Malabar.

SUMMARY of expenditure of the different districts for the Forest year 1914–15.

| Budget heads. | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool West. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTHERN CIRCLE. | RS. | RS. | RS. | RS. | RS | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and drawbacks .. | 4 | 1,555 | 98 | 53 | 26 | 4,183 | 67 | 685 | 3,643 | 10,314 |
| *A. "Conservancy and Works."* | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. | .. | 8,211 | 319 | 1,930 | 20 | .. | 884 | 2,147 | 8,568 | 22,079 |
| (*b*) Firewood and charcoal .. | 21 | 271 | 2,446 | 59 | 478 | 224 | .. | 2,088 | 4,309 | 9,896 |
| (*c*) Bamboos .. | .. | 63 | 2,470 | .. | 280 | .. | 34 | 44 | .. | 2,891 |
| (*d*) Sandalwood .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce.. | .. | 418 | .. | .. | 4 | 200 | 997 | 80 | 2,100 | 3,799 |
| II. Timber and other produce removed from the forests by consumers or purchasers .. .. | .. | 6,070 | 4,972 | 3,642 | 12,215 | 1,933 | 6,286 | 6,689 | 10,522 | 52,329 |
| III. Confiscated drift and waifwood .. .. | .. | 43 | .. | 122 | 1,807 | 4 | 10 | 83 | 17 | 2,086 |
| IV. Revenue from forests not managed by Government .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government .. .. .. | .. | .. | 949 | .. | .. | .. | .. | .. | .. | 949 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | |
| (*a*) Purchase of cattle. | .. | .. | .. | .. | .. | .. | .. | .. | 264 | 264 |
| (*b*) Feed and keep of cattle .. .. | .. | 2,448 | 1,105 | 1,089 | .. | .. | 8 | 83 | 3,653 | 8,386 |
| (*c*) Stores, tools and plant .. .. | 102 | 207 | 121 | 2,391 | 4,919 | 4,772 | 491 | 305 | 631 | 13,939 |
| VII. Communications and buildings— | | | | | | | | | | |
| (*a*) Roads and bridges .. .. | .. | 4,956 | 121 | 2,853 | 2,801 | 2,460 | 10,504 | 7,944 | 694 | 32,333 |
| (*b*) Buildings .. | 19 | 6,774 | 1,534 | 5,092 | 5,469 | 632 | 5,497 | 3,091 | 3,108 | 31,216 |
| (*c*) Other works .. | .. | 328 | 45 | 871 | 86 | 151 | 937 | 510 | 168 | 3,096 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | |
| (*a*) Demarcation .. | .. | 2,620 | 247 | 899 | 1,640 | 316 | 285 | 284 | 1,135 | 7,426 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Surveys .. .. | 144 | 699 | .. | 1,909 | 2,143 | 993 | 1,050 | 2,476 | 1,146 | 10,560 |
| (*d*) Working plans .. | .. | .. | .. | .. | 80 | .. | .. | .. | 14 | 94 |
| (*e*) Sowing and planting .. .. | 1,155 | 181 | 11 | 210 | 305 | 917 | 503 | 685 | 37,883 | 41,850 |
| (*f*) Protection from fire .. .. | .. | 5,705 | 2,070 | 6,999 | 4,440 | 1,246 | 13,185 | 13,639 | 17,989 | 65,273 |
| (*g*) Other works .. | .. | .. | 2 | 10 | 193 | 6,586 | 636 | 1,910 | 3,526 | 12,863 |
| X. Miscellaneous— | | | | | | | | | | |
| (*a*) Law charges .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 2 |
| (*b*) Other charges .. | 1,027 | 740 | 1 | 1 | 22 | 14 | .. | 111 | 63 | 1,979 |
| Total, A. "Conservancy and Works" .. .. .. | 2,468 | (*a*)39,736 | 16,413 | 28,077 | 36,902 | 20,448 | 41,307 | 42,169 | 95,790 | 3,23,310 |
| *B. "Establishments."* | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (*a*) Conservators .. .. | 22,800 | .. | .. | .. | .. | .. | .. | .. | .. | 22,800 |
| (*b*) Superior officers .. | 2,212 | 9,924 | 15,291 | 10,340 | 7,800 | 6,427 | 6,994 | 8,697 | 14,245 | 81,930 |
| (*c*) Subordinate Forest and Depot establishments. | .. | 21,752 | 7,322 | 13,459 | 15,143 | 9,794 | 15,279 | 21,998 | 21,957 | 1,26,704 |
| (*d*) Office establishment .. | 9,385 | 8,015 | 3,766 | 5,404 | 7,730 | 3,840 | 5,397 | 6,235 | 8,273 | 58,045 |
| (*e*) Deputation and special allowances. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

(*a*) Excludes Rs. 8,171 being expenditure incurred in the Parlakimedi Maliahs.

Summary of expenditure of the different districts for the Forest year 1914–15—*cont.*

| Budget heads. | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool, West. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTHERN CIRCLE—*cont.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | Rs. |
| *B.* "*Establishments*"—cont. | | | | | | | | | | |
| II. Travelling allowances— | | | | | | | | | | |
| (*a*) Conservators .. | 2,785 | .. | .. | .. | .. | .. | .. | 290 | .. | 3,075 |
| (*b*) Superior officers .. | 138 | 2,573 | 1,003 | 2,422 | 1,236 | 1,242 | 2,233 | 2,210 | 3,824 | 16,881 |
| (*c*) Subordinate Forest and Depot establishments. | .. | 5,575 | 2,007 | 3,697 | 4,883 | 3,042 | 5,771 | 6,845 | 6,630 | 38,450 |
| (*d*) Office establishment. | 1,075 | 2,170 | 1,043 | 1,283 | 1,751 | 1,098 | 1,873 | 1,216 | 1,748 | 13,257 |
| III. Contingencies— | | | | | | | | | | |
| (*a*) Rents, rates and taxes. | 133 | 127 | 47 | 88 | 295 | 239 | 170 | 179 | 150 | 1,426 |
| (*b*) Official postage and service telegrams. | 1,174 | 1,228 | 692 | 859 | 1,423 | 1,174 | 888 | 975 | 1,359 | 9,772 |
| (*c*) Telephone charges .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sundries .. .. | 10,461 | 2,113 | 1,206 | 1,323 | 3,393 | 1,343 | 2,101 | 1,460 | 2,126 | 25,526 |
| Total, B. "Establishment". | 50,163 | (*a*)53,477 | 32,377 | 38,875 | 43,652 | 28,199 | 40,706 | 50,105 | 60,312 | 3,97,866 |
| Grand Total of Expenditure A and B. | 52,631 | 93,213 | 48,790 | 66,952 | 80,554 | 48,647 | 82,013 | 92,274 | 1,56,102 | 7,21,176 |

| Budget heads. | Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, West. | Cuddapah, East. | Nellore. | Chingleput. | Chittoor. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | Rs. |
| I. Refunds and Drawbacks. | .. | 747 | 2,146 | 1,054 | 1,631 | 611 | 3,068 | 965 | 461 | 10,683 |
| *A.* "*Conservancy and Works.*" | | | | | | | | | | |
| I. Timber, etc, removed from the forest by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. | .. | .. | .. | | 201 | 299 | .. | .. | .. | 500 |
| (*b*) Firewood and charcoal. | .. | 67 | .. | — 4 | .. | 104 | — 13 | .. | .. | 154 |
| (*c*) Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sandalwood .. | .. | 119 | .. | .. | .. | .. | .. | .. | .. | 119 |
| (*e*) Grass and other minor produce. | .. | .. | .. | 33 | .. | 237 | 3,581 | .. | .. | 3,851 |
| II. Timber, etc., removed from the forests by consumers, or purchasers. | .. | 2,901 | 1,975 | 6,941 | 4,063 | 9,607 | 3,754 | 4,310 | 2,358 | 35,909 |
| III. Confiscated drift and waifwood. | .. | 1 | 7 | .. | 23 | 31 | .. | .. | .. | 62 |
| IV. Forests not managed by Government— | | | | | | | | | | |
| (*a*) Shared and private forests. | .. | .. | .. | .. | . | .. | .. | .. | .. | .. |
| V Rent of leased forests and payments to shareholders in forests managed by Government. | .. | 8,000 | .. | .. | .. | .. | .. | .. | .. | 8,000 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | |
| (*a*) Purchase of cattle. | .. | .. | .. | .. | .. | .. | .. | .. | 66 | 66 |
| (*b*) Feed and keep of cattle. | .. | .. | .. | .. | .. | .. | 449 | 22 | .. | 471 |
| (*c*) Stores, tools and plant. | 207 | 353 | 306 | 534 | 213 | 715 | 1,762 | 535 | 356 | 4,981 |
| VII. Communications and buildings— | | | | | | | | | | |
| (*a*) Roads and bridges. | .. | 795 | 1,274 | 39 | 308 | 7,754 | 1,669 | 1,272 | 2,559 | 15,670 |
| (*b*) Buildings . | .. | 1,674 | 6,241 | 1,961 | 2,749 | 13,381 | 3,404 | 1,868 | 2,232 | 33,515 |
| (*c*) Other works .. | .. | 159 | 1,280 | 75 | . | 307 | 414 | 54 | 386 | 2,675 |

(*a*) Excludes Rs. 29,155 being the cost of establishment in Parlakimedi Maliahs

Summary of expenditure of the different districts for the Forest year 1914–15—*cont*

| Budget heads. | Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, West. | Cuddapah, East. | Nellore. | Chingleput. | Chittoor. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL CIRCLE—*cont.* | | | | | | | | | | |
| *A.* "*Conservancy and Works*" —cont. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | |
| (*a*) Demarcation .. | .. | 1,421 | 1,830 | 937 | 678 | 2,520 | 1,792 | 1,314 | 2,711 | 13,203 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | .. | 6,202 | .. | .. | 73 | 7 | .. | 6,300 |
| (*c*) Surveys (Local. | 902 | 822 | 543 | 508 | 443 | 720 | 1,213 | 400 | 485 | 6,036 |
| (*d*) Working plans. | 675 | .. | .. | .. | .. | .. | .. | .. | .. | 675 |
| (*e*) Sowing and planting .. | .. | 674 | 271 | 1,357 | .. | 507 | 4,194 | 671 | 988 | 8,612 |
| (*f*) Protection from fire .. | .. | 6,869 | 7,015 | 80 | 4,118 | 3,702 | 1,605 | 957 | 1,723 | 26,069 |
| (*g*) Other works .. | .. | 13,547 | 11,319 | 9,787 | 4,156 | 3,649 | 6,684 | 8,666 | 13,648 | 71,456 |
| IX. Miscellaneous— | | | | | | | | | | |
| (*a*) Law Charges .. | .. | .. | .. | .. | .. | .. | 565 | .. | .. | 565 |
| (*b*) Other Charges. | .. | 135 | 969 | 128 | 232 | 330 | 386 | 96 | 52 | 2,328 |
| Total A. "Conservancy and Works". .. | 1,784 | 37,537 | 33,030 | 28,596 | 17,184 | 43,863 | 31,532 | 20,172 | 27,514 | 2,41,212 |
| *B.* "*Establishments.*" | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (*a*) Conservators .. | 23,548 | .. | .. | .. | .. | .. | .. | .. | .. | 23,548 |
| (*b*) Superior officers .. | 3,862 | 15,468 | 16,393 | 5,468 | 3,159 | 11,330 | 18,706 | 3,802 | 19,983 | 98,171 |
| (*c*) Subordinate Forest and Depot establishments. | 1,122 | 19,000 | 16,744 | 12,102 | 13,790 | 19,287 | 19,049 | 6,866 | 14,829 | 1,22,789 |
| (*d*) Office establishments. | 9,080 | 5,890 | 5,647 | 5,854 | 4,791 | 6,407 | 13,327 | 3,455 | 5,618 | 60,069 |
| (*e*) Deputation and special allowances. | .. | .. | .. | .. | .. | | .. | .. | .. | |
| (*f*) Exchange compensation allowances. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | |
| (*a*) Conservators .. | 2,507 | .. | .. | 244 | .. | .. | .. | .. | .. | 2,751 |
| (*b*) Superior officers .. | 138 | 1,514 | 1,324 | 1,567 | 1,254 | 2,173 | 1,880 | 1,599 | 2,353 | 13,802 |
| (*c*) Subordinate Forest and Depot establishments. | 111 | 5,170 | 5,422 | 3,821 | 4,231 | 4,831 | 4,206 | 1,973 | 3,935 | 33,700 |
| (*d*) Office establishments. | 763 | 1,420 | 1,502 | 1,223 | 849 | 1,114 | 2,719 | 779 | 929 | 11,298 |
| III. Contingencies— | | | | | | | | | | |
| (*a*) Rents, rates and taxes. | .. | 613 | 115 | 175 | 86 | 72 | 34 | 346 | 146 | 1,587 |
| (*b*) Service postage and telegrams. | 682 | 1,193 | 998 | 1,443 | 719 | 912 | 1,871 | 542 | 1,027 | 9,387 |
| (*d*) Sundries .. .. | 9,812 | 2,235 | 2,567 | 1,063 | 1,043 | 1,992 | 1,561 | 439 | 1,244 | 21,956 |
| Total B. "Establishment". | 51,625 | 52,503 | 50,712 | 32,960 | 29,922 | 48,118 | 63,353 | 19,861 | 50,064 | 3,99,058 |
| Grand total of Expenditure. | 53,409 | 90,040 | 83,742 | 61,556 | 47,106 | 91,981 | 94,885 | 39,973 | 77,578 | 6,40,27 |

| Budget heads. | Direction. | Working plans officer, Southern Circle. | Vellore, North. | Vellore, South. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly *cum* Tanjore. | Madura. | Tinnevelly *cum* Ramnad. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHERN CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks. | .. | .. | 1,631 | 367 | 763 | 768 | 1,038 | 1,100 | 2,944 | 1,506 | 10,117 |
| *A.* "*Conservancy and Works.*" | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | |
| (*a*) Timber .. | .. | .. | 5 | 236 | .. | 1,065 | 538 | .. | .. | 41 | 1,885 |
| (*b*) Firewood and charcoal. | .. | .. | .. | 28 | .. | 18 | .. | 549 | .. | 63 | 658 |
| (*c*) Bamboos .. | .. | .. | .. | .. | 42 | 15 | .. | .. | .. | 60 | 117 |
| (*d*) Sandalwood .. | .. | .. | .. | 3,695 | .. | 847 | 222 | 245 | .. | .. | 5,009 |
| (*e*) Grass and other minor produce. | .. | .. | 20 | .. | .. | .. | .. | 28 | .. | 74 | 122 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | .. | 2,221 | 2,464 | 2,276 | 1,687 | 4,251 | 2,800 | 2,789 | 2,926 | 21,414 |

Summary of expenditure of the different districts for the Forest year 1914-15 —*cont.*

| Budget heads. | Direction. | Working plans officer, Southern Circle. | Vellore, North. | Vellore, South. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly *cum* Tanjore. | Madura. | Tinnevelly *cum* Ramnad. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHERN CIRCLE—*cont.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| *A.* "*Conservancy and Works*" —cont | | | | | | | | | | | |
| III. Confiscated drift and waifwood. | .. | .. | 3 | 12 | 15 | 29 | 7 | .. | 1 | .. | 67 |
| IV. Forests not managed by Government— | | | | | | | | | | | |
| (*a*) Shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (*a*) Purchase of cattle. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Feed and keep of cattle. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | 3 |
| (*c*) Stores, tools and plant. | 376 | 3 | 154 | 161 | 345 | 919 | 480 | 228 | 283 | 421 | 3,370 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (*a*) Roads and bridges. | .. | .. | 3,617 | 4,140 | 429 | 2,886 | 5,332 | 2,792 | 8,364 | 2,353 | 29,913 |
| (*b*) Buildings .. | .. | .. | 3,391 | 4,793 | 1,819 | 5,618 | 8,680 | 6,304 | 6,116 | 6,956 | 43,577 |
| (*c*) Other works .. | .. | .. | 167 | 526 | 80 | 712 | 505 | 80 | 863 | 882 | 3,815 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | |
| (*a*) Demarcation .. | .. | .. | 9 | 212 | 107 | 448 | 989 | 605 | 3,408 | 781 | 6,559 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | 2,886 | 17 | .. | .. | 121 | .. | 1,377 | .. | 4,401 |
| (*c*) Surveys { Local. | 610 | .. | 405 | 502 | 398 | 1,188 | 1,257 | 556 | 1,097 | 1,256 | 7,269 |
| (*c*) Surveys { India. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans. | .. | 5,165 | .. | .. | .. | .. | .. | .. | .. | .. | 5,165 |
| (*e*) Sowing and planting. | .. | .. | 2,173 | 40 | 252 | 265 | 116 | 1,607 | 5,702 | 1,221 | 11,376 |
| (*f*) Protection from fire. | .. | .. | 725 | 2,330 | 186 | 3,227 | 2,270 | 875 | 4,336 | 5,444 | 19,393 |
| (*g*) Other works .. | .. | .. | 8,148 | 7,639 | 6,938 | 6,676 | 5,754 | 9,634 | 12,435 | 6,226 | 63,450 |
| IX. Miscellaneous— | | | | | | | | | | | |
| (*a*) Law charges .. | .. | .. | .. | .. | .. | .. | 6 | .. | .. | .. | 8 |
| (*b*) Other charges .. | .. | .. | 24 | 284 | 1 | 239 | 45 | .. | 7 | 78 | 676 |
| Total, A. "Conservancy and Works". | 986 | 5,168 | 23,948 | 27,082 | 12,888 | 25,739 | 30,573 | 26,303 | 46,778 | 28,782 | 2,28,247 |
| *B.* "*Establishment.*" | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (*a*) Conservators .. | 20,681 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,681 |
| (*b*) Superior officers .. | 2,212 | 9,329 | 6,686 | 11,850 | 3,987 | 17,710 | 6,950 | 6,473 | 19,071 | 15,000 | 99,268 |
| (*c*) Subordinate Forest and Depot establishments. | 1,720 | 2,815 | 10,579 | 14,203 | 9,632 | 13,861 | 13,099 | 14,161 | 18,581 | 18,032 | 1,16,713 |
| (*d*) Office establishments. | 8,145 | 1,835 | 3,565 | 5,725 | 5,101 | 6,335 | 5,328 | 6,464 | 6,455 | 5,331 | 54,284 |
| (*e*) Deputation and Special allowances | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*f*) Exchange compensation allowance. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | | |
| (*a*) Conservators .. | 1,379 | .. | .. | .. | .. | .. | .. | .. | .. | 451 | 1,830 |
| (*b*) Superior officers .. | 138 | 3,028 | 1,017 | 2,083 | 1,344 | 2,291 | 1,498 | 1,372 | 3,777 | 924 | 17,472 |
| (*c*) Subordinate Forest and Depot establishments. | 246 | 1,336 | 2,614 | 3,487 | 3,147 | 4,293 | 3,123 | 4,073 | 5,144 | 5,039 | 32,502 |
| (*d*) Office establishments. | 679 | 914 | 429 | 988 | 983 | 839 | 559 | 846 | 1,849 | 994 | 9,080 |
| III. Contingencies— | | | | | | | | | | | |
| (*a*) Rents, rates and taxes. | .. | .. | 193 | 294 | 288 | 175 | 67 | 148 | 345 | 201 | 1,711 |
| (*b*) Official postage and telegrams. | 995 | 252 | 818 | 1,084 | 1,158 | 1,572 | 635 | 1,320 | 1,399 | 1,248 | 10,482 |
| (*c*) Telephone charges | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sundries .. .. | 9,733 | 1,672 | 780 | 928 | 797 | 1,756 | 1,052 | 1,081 | 1,918 | 829 | 20,546 |
| Total, B. "Establishment." | 45,929 | 21,211 | 26,681 | 40,642 | 26,437 | 48,832 | 32,311 | 35,938 | 58,539 | 48,049 | 3,84,569 |
| Grand Total of Expenditure | 46,915 | 26,379 | 50,629 | 67,724 | 39,325 | 74,571 | 62,884 | 62,241 | 1,05,317 | 76,831 | 6,12,816 |

Summary of expenditure of the different districts for the Forest year 1914-15—*cont.*

| Budget heads. | Direction. | South Canara. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| WESTERN CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks | .. | 4,265 | 399 | 21 | 138 | 107 | 12 | 360 | 906 | 6,208 |
| *A. "Conservancy and Works."* | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. | —135 | 1,284 | 7,299 | 6,093 | 4,688 | 168 | 66 | 5 | 8,695 | 28,140 |
| (*b*) Firewood and charcoal. | .. | 5,880 | 414 | 345 | 19,180 | 1,328 | 794 | 527 | 50 | 28,518 |
| (*c*) Bamboos .. .. | .. | 166 | 1,068 | 3,930 | .. | 597 | .. | 53 | .. | 5,814 |
| (*d*) Sandalwood .. | 262 | 309 | .. | .. | 299 | 3,733 | 5,447 | 2 | .. | 10,052 |
| (*e*) Grass and other minor produce. | .. | 2,378 | 22 | .. | 451 | 1,997 | 3,282 | 1 | 707 | 8,838 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | 6,706 | 307 | 88 | 862 | 1,842 | 2,585 | 1,819 | 2,037 | 16,246 |
| III. Confiscated, drift and waifwood. | .. | 111 | 96 | 680 | .. | .. | 2 | 11 | 33 | 933 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | .. | 36 | 1,317 | 7,381 | .. | .. | .. | 2,500 | 11,234 |
| VI Live-stock, stores, tools and plant— | | | | | | | | | | |
| (*a*) Purchase of cattle. | .. | 996 | 2,073 | 1,241 | 4,509 | .. | .. | .. | 3,861 | 12,680 |
| (*b*) Feed and keep of cattle. | .. | 4,118 | 11,545 | 18,683 | 22,021 | .. | .. | 156 | 13,245 | 69,768 |
| (*c*) Stores, tools and plant. | 735 | 337 | 904 | 1,125 | 1,691 | 273 | 738 | 86 | 4,858 | 10,747 |
| VII. Communications and buildings— | | | | | | | | | | |
| (*a*) Roads and bridges. | .. | 2,905 | 5,316 | 3,527 | 9,980 | 3,231 | 10,805 | 2,957 | 8,582 | 47,303 |
| (*b*) Buildings .. .. | 2 | 4,778 | 6,002 | 6,652 | 2,271 | 2,521 | 10,253 | 2,937 | 6,050 | 41,466 |
| (*c*) Other works .. | .. | 673 | 2,496 | 1,241 | 835 | 1,072 | 1,903 | 134 | 127 | 8,181 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | |
| (*a*) Demarcation .. | .. | 1,408 | 55 | 24 | 300 | 1,125 | 2,863 | 796 | 84 | 6,655 |
| (*b*) Cost of Forest Settlement; compensation for land and rights. | .. | .. | 3 | .. | 1,74,849 | 1,202 | .. | 316 | 2,850 | 1,79,220 |
| (*c*) Surveys { Local. | — 76 | 376 | 601 | 385 | 761 | 798 | 473 | 732 | 1,302 | 5,352 |
| (*c*) Surveys { India. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans .. | .. | 78 | | 79 | 90 | .. | .. | 6 | .. | 253 |
| (*e*) Sowing and planting. | 554 | — 2 | 2,033 | 4,506 | 1,443 | 14 | 103 | 333 | 2,024 | 11,008 |
| (*f*) Protection from fire. | .. | 4,420 | 7,454 | 2,753 | 3,758 | 3,059 | 3,223 | 2,371 | 2,328 | 29,366 |
| (*g*) Other works .. | .. | 882 | 2,104 | 1,650 | 1,258 | 3,378 | 4,583 | 4,938 | 2,231 | 21,024 |
| IX. Miscellaneous— | | | | | | | | | | |
| (*a*) Law charges .. | .. | 1 | .. | .. | 3 | 8 | 104 | .. | .. | 116 |
| (*b*) Other charges .. | 127 | 256 | 133 | 174 | 4,702 | 310 | 32 | 244 | 313 | 6,291 |
| Total, A. "Conservancy and Works." | 1,469 | 38,037 | 49,661 | 54,493 | 2,61,332 | 26,656 | 47,256 | 18,424 | 61,877 | 5,59,205 |
| *"B. Establishment.* | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (*a*) Conservators .. .. | 21,363 | .. | .. | .. | .. | .. | .. | .. | .. | 21,363 |
| (*b*) Superior officers .. | 3,562 | 8,190 | 5,273 | 8,976 | 21,196 | 3,265 | 18,000 | 5,276 | 21,147 | 94,884 |
| (*c*) Subordinate Forest and Depot establishments. | 1,286 | 19,982 | 15,210 | 7,278 | 17,590 | 9,611 | 15,021 | 11,355 | 10,262 | 1,07,595 |
| (*d*) Office establishments .. | 9,763 | 7,096 | 6,771 | 5,071 | 6,813 | 4,181 | 5,601 | 4,539 | 6,545 | 56,380 |
| II. Travelling allowances— | | | | | | | | | | |
| (*a*) Conservators .. .. | 2,237 | .. | .. | .. | .. | .. | .. | .. | .. | 2,237 |
| (*b*) Superior officers .. | 138 | 1,714 | 2,094 | 2,482 | 2,528 | 1,289 | 2,591 | 1,356 | 3,007 | 17,199 |
| (*c*) Subordinate Forest and Depot establishments. | 115 | 4,622 | 3,072 | 1,844 | 2,682 | 2,093 | 3,388 | 3,919 | 2,138 | 23,873 |
| (*d*) Office establishments .. | 576 | 1,072 | 763 | 813 | 607 | 695 | 850 | 743 | 848 | 6,967 |
| III. Contingencies— | | | | | | | | | | |
| (*a*) Rents, rates and taxes. | 69 | 104 | 86 | 57 | 765 | 622 | 35 | 59 | 97 | 1,894 |
| (*b*) Official postage and telegrams. | 612 | 1,601 | 642 | 616 | 534 | 360 | 744 | 410 | 1,007 | 6,496 |
| (*c*) Telephone charges .. | .. | .. | .. | .. | .. | .. | .. | .. | 337 | 337 |
| (*d*) Sundries .. .. .. | 12,013 | 2,245 | 2,416 | 1,927 | 1,111 | 1,473 | 1,278 | 1,088 | 3,086 | 26,637 |
| Total, B. "Establishment." | 51,734 | 46,626 | 36,297 | 29,063 | 53,826 | 23,589 | 47,508 | 28,745 | 48,474 | 3,65,862 |
| Grand Total of Expenditure A and B | 53,203 | 84,663 | 85,958 | 83,556 | 3,15,158 | 50,245 | 94,764 | 47,169 | 1,10,351 | 9,25,067 |

SUMMARY of receipts and expenditure during 1914-15 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements.

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1914-15. | 1913-14. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| RECEIPTS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. .. | 56,500 | 2,629 | 4,684 | 2,41,291 | 3,15,104 | 2,74,157 |
| (b) Firewood and charcoal .. | 30,774 | 5,009 | 2,438 | 68,239 | 1,06,460 | 1,46,036 |
| (c) Bamboos .. .. .. | 5,967 | 6 | 117 | 5,861 | 11,971 | 20,305 |
| (d) Sandalwood.. .. .. | .. | 364 | 65,316 | 1,10,482 | 1,76,162 | 1,52,375 |
| (e) Grass and other minor produce. | 10,034 | 15,819 | 460 | 24,883 | 51,196 | 50,387 |
| Total, I .. | 1,13,275 | 23,827 | 73,015 | 4,50,776 | 6,60,893 | 6,43,260 |
| II. Timber and other produce removed from the forests by consumers, etc.— | | | | | | |
| (a) Timber .. .. .. | 1,20,589 | 92,387 | 77,816 | 61,420 | 3,52,212 | 3,92,655 |
| (b) Firewood and charcoal .. | 1,50,026 | 2,15,532 | 4,68,626 | 65,601 | 8,99,785 | 7,91,394 |
| (c) Bamboos .. .. .. | 1,09,841 | 13,217 | 1,03,921 | 20,300 | 2,47,309 | 2,44,212 |
| (d) Grazing and fodder grass.. | 1,20,040 | 2,99,154 | 1,92,251 | 84,889 | 6,96,334 | 6,81,893 |
| (e) Other produce .. .. | 72,259 | 2,70,891 | 1,98,254 | 58,606 | 6,00,010 | 7,44,103 |
| (f) Tree-owners' fees .. .. | 31,950 | 51,407 | 10,279 | 1,553 | 95,189 | 1,04,204 |
| (g) Other items .. .. | .. | 228 | 663 | .. | 891 | 1,030 |
| (h) Commutation fees .. .. | 28 | .. | 448 | .. | 476 | 2,082 |
| Total, II .. | 6,04,733 | 9,42,846 | 10,52,258 | 2,92,369 | 28,92,206 | 29,61,573 |
| III. Confiscated drift and waifwood .. | 5,513 | 3,217 | 3,487 | 6,166 | 18,383 | 22,024 |
| IV. Revenue from forests not managed by Government. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | |
| (a) Fines and forfeitures .. | 30,959 | 83,041 | 1,02,305 | 25,821 | 2,42,126 | 2,41,411 |
| (b) Other sources .. .. | 15,913 | 37,189 | 14,186 | 1,36,956 | 2,04,244 | 1,80,574 |
| Total, V .. | 46,872 | 1,20,230 | 1,16,491 | 1,62,777 | 4,46,370 | 4,21,985 |
| Grand Total, Receipts .. | 7,70,393 | 10,90,120 | 12,45,251 | 9,12,088 | 40,17,852 | 40,48,842 |
| EXPENDITURE. | | | | | | |
| 1. Refunds and drawbacks .. .. | 10,314 | 10,683 | 10,117 | 6,208 | 37,322 | 43,814 |
| *A. Conservancy and Works.* | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. . | 22,079 | 500 | 1,885 | 28,140 | 52,604 | 56,465 |
| (b) Firewood and charcoal .. | 9,896 | 154 | 658 | 28 518 | 39,226 | 93,636 |
| (c) Bamboos .. .. .. | 2,891 | .. | 117 | 5,814 | 8,822 | 10,572 |
| (d) Sandalwood .. .. | .. | 119 | 5,009 | 10,052 | 15,180 | 15,598 |
| (e) Grass and other minor produce. | 3,799 | 3,851 | 122 | 8,838 | 16,610 | 29,544 |
| Total, A-I .. | 38,665 | 4,624 | 7,791 | 81,362 | 1,32,442 | 2,05,815 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | 52,329 | 35,909 | 21,414 | 16,246 | 1,25,898 | 1,29,449 |
| III. Confiscated drift and waifwood .. | 2,086 | 62 | 67 | 933 | 3,148 | 2,821 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | 949 | 8,000 | .. | 11,234 | 20,183 | 16,621 |
| VI. Live-stock, stores, tools and plant— | | | | | | |
| (a) Purchase of cattle .. | 264 | 66 | .. | 12,680 | 13,010 | 9,664 |
| (b) Feed and keep of cattle .. | 8,386 | 471 | 3 | 69,768 | 78,628 | 78,783 |
| (c) Stores, tools and plant .. | 13,939 | 4,981 | 3,370 | 10,747 | 33,037 | 32,863 |
| Total, A-VI .. | 22,589 | 5,518 | 3,373 | 93,195 | 1,24,675 | 1,21,310 |

Summary of receipts and expenditure during 1914-15 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements—*cont.*

| Budget heads | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1914-15. | 1913-14. |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| EXPENDITURE—*cont.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| *A. Conservancy and Works*—cont. | | | | | | |
| VII. Communications and buildings— | | | | | | |
| (*a*) Roads and bridges .. | 32,333 | 15,670 | 29,913 | 47,303 | 1,25,219 | 1,29,723 |
| (*b*) Buildings .. .. .. | 31,216 | 33,510 | 43,577 | 41,466 | 1,49,769 | 1,77,604 |
| (*c*) Other works .. .. | 3,096 | 2,675 | 3,815 | 8,181 | 17,767 | 29,111 |
| Total, A-VII .. | 66,645 | 51,855 | 77,305 | 96,950 | 2,92,755 | 3,36,438 |
| VIII. Demarcation, etc.— | | | | | | |
| (*a*) Demarcation .. .. | 7,426 | 13,203 | 6,559 | 6,655 | 33,843 | 28,429 |
| (*b*) Cost of settlement .. | .. | 6,300 | 4,401 | 1,79,220 | 1,89,921 | 18,750 |
| (*c*) Surveys. (1) Local .. (2) India .. | 10,560 | 6,036 | 7,269 | 5,352 | 29,217 | 30,097 7 |
| (*d*) Working-plans .. .. | 94 | 675 | 5,165 | 253 | 6,187 | 3,199 |
| (*e*) Sowing and planting .. | 41,850 | 8,612 | 11,376 | 11,008 | 72,846 | 1,03,047 |
| (*f*) Protection from fire .. | 65,273 | 26,069 | 19,393 | 29,366 | 1,40,101 | 1,34,269 |
| (*g*) Other works .. .. | 12,863 | 71,456 | 63,450 | 21,024 | 1,68,793 | 1,77,029 |
| Total, A-VIII .. | 1,38,066 | 1,32,351 | 1,17,613 | 2,52,878 | 6,40,908 | 4,94,827 |
| IX. Miscellaneous— | | | | | | |
| (*a*) Law charges .. .. | 2 | 565 | 6 | 116 | 689 | 506 |
| (*b*) Other charges .. .. | 1,979 | 2,328 | 678 | 6,291 | 11,276 | 10,859 |
| Total, A-IX .. | 1,981 | 2,893 | 684 | 6,407 | 11,965 | 11,365 |
| Total, A. Conservancy and Works, including Refunds. | 3,33,624 | 2,51,895 | 2,38,364 | 5,65,413 | 13,89,296 | 13,62,460 |
| *B. Establishments.* | | | | | | |
| I. Salaries— | | | | | | |
| (*a*) Conservators .. .. | 22,800 | 23,548 | 20,681 | 21,363 | 88,392 | 86,057 |
| (*b*) Superior officers .. .. | 81,930 | 98,171 | 99,268 | 94,884 | 3,74,253 | 3,52,736 |
| (*c*) Subordinate forest and depôt establishments. | 1,26,704 | 1,22,789 | 1,16,713 | 1,07,595 | 4,73,801 | 4,55,399 |
| (*d*) Office establishments .. | 58,045 | 60,069 | 54,284 | 56,380 | 2,28,778 | 2,18,104 |
| (*e*) Deputation and special allowance. | .. | .. | .. | .. | .. | .. |
| Total, B-I .. | 2,69,479 | 3,04,577 | 2,90,946 | 2,80,222 | 11,65,224 | 11,12,296 |
| II. Travelling allowances— | | | | | | |
| (*a*) Conservators .. .. | 3,075 | 2,751 | 1,830 | 2,237 | 9,893 | 12,095 |
| (*b*) Superior officers .. .. | 16,881 | 13,802 | 17,472 | 17,199 | 65,354 | 54,594 |
| (*c*) Subordinate forest and depôt establishments. | 38,450 | 33,700 | 32,502 | 23,873 | 1,28,525 | 1,28,915 |
| (*d*) Office establishment .. | 13,257 | 11,298 | 9,080 | 6,967 | 40,602 | 38,611 |
| Total, B-II .. | 71,663 | 61,551 | 60,884 | 50,276 | 2,44,374 | 2,34,215 |
| III. Contingencies— | | | | | | |
| (*a*) Rents, rates and taxes .. | 1,426 | 1,587 | 1,711 | 1,894 | 6,618 | 7,180 |
| (*b*) Official postage and telegrams. | 9,772 | 9,387 | 10,482 | 6,496 * 337 | 36,474 | 40,648 |
| (*c*) Sundries .. .. .. | 25,526 | 21,956 | 20,546 | 26,637 | 94,665 | 84,143 |
| Total, B-III .. | 36,724 | 32,930 | 32,739 | 35,364 | 1,37,757 | 1,31,971 |
| Total, B. Establishments .. | 3,97,866 | 3,99,058 | 3,84,569 | 3,65,862 | 15,47,355 | 14,78,482 |
| Grand Total Expenditure including Refunds and Drawbacks. | 7,31,490 | 6,50,953 | 6,22,933 | 9,31,275 | 29,36,651 | 28,40,942 |
| Surplus .. .. | 38,903 | 4,39,167 | 6,22,318 | — 19,187 | 10,81,201 | 12,07,900 |
| Total .. | 7,70,393 | 10,90,120 | 12,45,251 | 9,12,088 | 40,17,852 | 40,48,842 |

* Telephone charges.

## ANNUAL FORM No. 81.

*Forest Department, Madras Presidency.*

OUTSTANDINGS and Liabilities on account of Contractors and Disbursers for the Forest year 1914-15.

| District. | Department debtor. | | | Department Creditor. | | | Balance due. | |
|---|---|---|---|---|---|---|---|---|
| | At commencement of year. | Recoveries in cash and value of supplies and work done during the year. | At close of year. | At commencement of year. | Payments made during year. | At close of year. | To Department (Outstandings). | By Department (Liabilities). |
| *Northern Circle.* | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| Direction, Northern Circle .. | .. | 2,358 9 2 | 2,358 9 2 | 51 4 4 | 2,426 7 8 | 2,477 12 0 | 119 2 10 | .. |
| Ganjam .. .. .. | .. | (a)86,768 15 5 | (b) 86,768 15 5 | 2,979 1 1 | 86,365 14 7 | 89,344 15 8 | 2,576 0 3 | .. |
| Vizagapatam .. .. | .. | 33,855 10 7 | 33,855 10 7 | 703 10 9 | 34,136 14 1 | 34,840 8 10 | 984 14 3 | .. |
| Godavari, Upper .. .. | .. | 49,874 10 8 | 49,874 10 8 | 1,297 12 2 | 49,609 9 7 | 50,907 5 9 | 1,032 11 1 | .. |
| Do. Lower .. .. | .. | 70,210 11 1 | 70,210 11 1 | 1,870 15 8 | 69,967 9 1 | 71,838 8 9 | 1,627 13 8 | .. |
| Kistna .. .. .. | .. | 35,741 9 11 | 35,741 9 11 | 1,221 5 3 | 35,571 14 3 | 36,793 3 6 | 1,051 9 7 | .. |
| Kurnool, East .. .. | .. | 82,411 3 10 | 82,411 3 10 | 2,266 0 1 | 82,360 3 11 | 84,626 4 0 | 2,215 0 2 | .. |
| Do. South .. .. | .. | 81,658 11 5 | 81,658 11 5 | 1,859 13 3 | 81,296 4 3 | 83,156 1 6 | 1,497 6 1 | .. |
| Do. West .. .. | .. | 1,97,780 13 0 | 1,97,780 13 0 | 1,584 9 4 | 1,99,160 4 11 | 2,00,744 14 3 | 2,964 1 3 | .. |
| Total .. | .. | 6,40,660 15 1 | 6,40,660 15 1 | 13,854 7 11 | 6,40,895 2 4 | 6,54,729 10 3 | 14,068 11 2 | .. |
| *Central Circle.* | | | | | | | | |
| Direction, Central Circle .. | .. | 593 10 3 | 593 10 3 | 103 14 11 | 528 2 7 | 632 1 6 | 38 7 3 | .. |
| Bellary .. .. .. .. | .. | 64,958 4 0 | 64,958 4 0 | 1,450 14 8 | 64,504 13 1 | 65,955 11 9 | 997 7 9 | .. |
| Anantapur .. .. .. | .. | 73,597 4 6 | 73,597 4 6 | 1,520 13 10 | 72,883 1 11 | 74,403 15 9 | 806 11 3 | .. |
| Guntur .. .. .. | .. | 44,829 0 5 | 44,829 0 5 | 776 10 5 | 44,351 11 3 | 45,128 5 8 | 299 5 3 | .. |
| Cuddapah, West .. .. | .. | 44,271 14 11 | 44,271 14 11 | 750 7 10 | 45,452 8 5 | 46,203 0 3 | 1,931 1 4 | .. |
| Do. East .. .. | .. | 97,055 0 2 | 97,055 0 2 | 2,153 5 9 | 97,096 10 3 | 99,250 0 0 | 2,194 15 10 | .. |
| Nellore .. .. .. | .. | 69,505 2 7 | 69,505 2 7 | 888 3 2 | 70,902 9 11 | 71,790 13 1 | 2,285 10 6 | .. |
| Chingleput .. .. .. | .. | 34,707 6 9 | 34,707 6 9 | 1,002 8 1 | 34,918 0 10 | 35,920 8 11 | 1,213 2 2 | .. |
| Chittoor .. .. .. | .. | 59,176 3 10 | 59,176 3 10 | 395 1 8 | 59,842 5 2 | 60,237 6 10 | 1,061 3 0 | .. |
| Total .. | .. | 4,88,693 15 5 | 4,88,693 15 5 | 9,042 0 4 | 4,90,479 15 5 | 4,99,521 15 9 | 10,828 0 4 | .. |
| *Southern Circle.* | | | | | | | | |
| Direction, Southern Circle .. | .. | 1,288 13 7 | 1,288 13 7 | 64 6 8 | 1,245 10 3 | 1,310 0 11 | 21 3 4 | .. |
| North Vellore .. . | .. | 43,012 12 0 | 43,012 12 0 | 562 6 10 | 43,628 9 10 | 44,191 0 8 | 1,178 4 8 | .. |
| Do. South .. . | .. | 60,154 5 3 | 60,154 5 3 | 2,015 11 7 | 59,292 6 7 | 61,308 2 2 | 1153 12 11 | .. |
| Arcot, South .. .. . | .. | 30,951 8 8 | 30,951 8 8 | 261 4 9 | 30,970 14 6 | 31,232 3 3 | 280 10 7 | .. |
| Salem, North .. .. . | .. | 51,186 11 10 | 51,186 11 10 | 1,359 12 8 | 51,079 6 4 | 52,439 3 0 | 1,252 7 2 | .. |
| Do. South .. .. .. | .. | 59,695 3 5 | 59,695 3 5 | 2,277 3 4 | 60,482 7 7 | 62,759 10 11 | 3,064 7 6 | .. |
| Trichinopoly *cum* Tanjore .. | .. | 54,312 4 4 | 54,312 4 4 | 458 2 8 | 54,130 11 3 | 54,588 13 11 | 276 9 7 | .. |
| Madura .. .. .. | .. | 1,05,015 7 10 | 1,05,015 7 10 | 2,897 8 5 | 1,05,461 8 7 | 1,08,359 1 0 | 3,343 9 2 | .. |
| Tinnevelly *cum* Ramnad . | .. | 66,440 10 8 | 66,440 10 8 | 1,395 9 4 | 65,921 4 11 | 67,316 14 3 | 876 3 7 | .. |
| Working Plans officer, Trichinopoly. | .. | 17,621 5 0 | 17,621 5 0 | 697 6 3 | 17,294 6 0 | 17,991 12 3 | 370 7 3 | .. |
| Total . | .. | 4,89,679 2 7 | 4,89,679 2 7 | 11,989 8 6 | 4,89,507 5 10 | 5,01,496 14 4 | 11,817 11 9 | .. |
| *Western Circle.* | | | | | | | | |
| Direction, Western Circle .. | .. | 868 13 5 | 868 13 5 | 54 7 8 | 871 13 3 | 926 4 11 | 57 7 6 | .. |
| South Canara .. .. | .. | 81,731 12 11 | 81,731 12 11 | 2,436 14 5 | 80,892 0 1 | 83,328 14 6 | 1,597 1 7 | .. |
| North Malabar .. .. | .. | 72,343 0 8 | 72,343 0 8 | 1,617 12 3 | 74,691 8 4 | 76,309 4 7 | 3,966 3 11 | .. |
| South do. .. .. | .. | 69,549 3 0 | 69,549 3 0 | 1,413 14 5 | 70,143 5 1 | 71,557 3 6 | 2,008 0 6 | .. |
| The Nilgiris .. .. .. | .. | 1,04,605 4 0 | 1,04,605 4 0 | 2,807 5 1 | 1,05,382 15 8 | 1,08,190 4 9 | 3,585 0 9 | .. |
| Kollegal .. .. .. | .. | 50,926 14 11 | 50,926 14 11 | 2,413 6 6 | 49,331 11 5 | 51,745 1 11 | 818 3 0 | .. |
| North Coimbatore .. .. | .. | 87,253 15 6 | 87,253 15 6 | 2,910 2 3 | 86,894 13 4 | 89,804 15 7 | 2,551 0 1 | .. |
| Central do. .. .. | .. | 44,108 9 4 | 44,108 9 4 | 2,146 4 1 | 43,607 1 7 | 45,753 5 8 | 1,644 12 4 | .. |
| South do. .. .. .. | .. | 80,252 3 0 | 80,252 3 0 | 2,041 15 8 | 81,061 4 8 | 83,103 4 4 | 2,851 1 4 | .. |
| Total .. | .. | 5,91,639 12 9 | 5,91,639 12 9 | 17,842 2 4 | 5,92,876 9 5 | 6,10,718 11 9 | 19,078 15 0 | .. |
| Grand Total, Presidency .. | .. | 22,10,673 13 10 | 22,10,673 13 10 | 52,708 3 1 | 22,13,759 1 0 | 22,66,467 4 1 | 55,793 6 3 | .. |

(a) Excludes Rs. 17,535 belonging to the Parlakimedi Maliahs.
(b) Excludes Rs. 830 belonging to the Parlakimedi Maliahs.

ACCOUNTANT-GENERAL'S OFFICE,
MADRAS, 1st *September* 1915.

R. SRINIVASA AYYAR,
*Deputy Accountant-General.*

## ANNUAL FORM No. 82.

*Forest Department, Madras Presidency.*

REVENUE received and outstandings on account of revenue during 1914-15.

| District. | Particulars. | Outstandings at commencement of year. | Value of sales and other revenue during year. | Total. | Amount realized during year. | Balance due to the department at end of year. |
|---|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| *Northern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 91 0 0 | 91 0 0 | 91 0 0 | .. |
| Ganjam .. .. .. | Do. | (i) 11,559 11 10 | (j) 99,122 5 2 | (k)1,10,682 1 0 | (l) 1,02,870 0 0 | (a)(m)7,812 1 0 |
| Vizagapatam .. .. | Do. | 5,496 14 0 | 45,463 8 0 | 50,960 6 0 | 46,276 0 0 | (b) 4,684 6 0 |
| Godavari, Upper .. .. | Do. | 99 7 9 | 38,174 14 3 | 38,274 6 0 | 38,033 0 0 | 241 6 0 |
| Do. Lower .. .. | Do. | 16,622 8 0 | 2,31,876 8 11 | 2,48,499 0 11 | 2,19,204 0 0 | (c) 29,295 0 11 |
| Kistna .. .. .. | Do. | 13,165 14 9 | 98,214 7 0 | 1,11,380 5 9 | { 92,326 0 0 * 420 0 0 } | (d) 18,634 5 9 |
| Kurnool, East .. .. | Do. | 5,922 10 1 | 49,206 10 0 | 55,129 4 1 | 55,064 0 0 | 65 4 1 |
| Do. South .. .. | Do. | 3,808 12 5 | 1,03,913 11 6 | (h)1,07,722 7 11 | 96,447 0 0 | (e) 11,275 7 11 |
| Do. West .. .. | Do. | 8,508 8 8 | 1,17,388 7 4 | 1,25,897 0 0 | 1,20,082 0 0 | 5,815 0 0 |
| | Total .. | 65,184 7 6 | 7,83,451 8 2 | 8,48,635 15 8 | { 7,70,393 0 0 * 420 0 0 } | 77,822 15 8 |
| *Central Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 321 0 0 | 321 0 0 | 321 0 0 | .. |
| Bellary .. .. .. | Do. | 45,663 5 3 | 1,14,492 8 8 | 1,60,155 13 11 | { 1,48,611 0 0 (f)+ 120 0 0 } | 11,424 13 11 |
| Anantapur .. .. .. | Do. | 2,24,698 11 9 | 88,527 9 0 | 3,13,226 4 9 | 1,74,896 0 0 | 1,38,330 4 9 |
| Guntur .. .. .. | Do. | { 20,995 0 10 (g) — 112 8 0 } | 1,62,623 1 2 | 1,83,505 10 0 | 1,74,862 0 0 | 8,643 10 0 |
| Cuddapah, West .. .. | Do. | 3,365 4 5 | 62,326 15 3 | 65,692 3 8 | { 60,890 0 0 (f) + 4 6 2 } | 4,797 13 6 |
| Do. East .. .. | Do. | 19,303 1 10 | 81,861 14 0 | 1,01,764 15 10 | 85 630 0 0 | 16,134 15 10 |
| Nellore .. .. .. | Do. | 94,795 9 6 | 2,07,272 12 10 | 3,02,068 6 4 | 2,73,513 0 0 | 28,555 6 4 |
| Chingleput .. .. .. | Do. | { 6,287 8 0 (g) — 50 0 0 } | 61,738 3 10 | 67,975 11 10 | 60,336 0 0 | 7,639 11 10 |
| Chittoor .. .. .. | Do. | 12,265 3 6 | 1,50,786 3 10 | 1,63,051 7 4 | 1,11,061 0 0 | 51,990 7 4 |
| | Total .. | { 4,27,973 13 1 (g) — 162 8 0 } | 9,29,950 4 7 | 13,57,761 9 8 | { 10,90,120 0 0 (f) +124 6 2 } | 2,67,517 3 6 |
| *Southern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 562 0 0 | 562 0 0 | 562 0 0 | .. |
| Vellore, North .. .. | Do. | 20,352 9 0 | 1,35,469 13 4 | 1,55,822 6 4 | 1,17,657 0 0 | 38,165 6 4 |
| Do. South .. .. | Do. | 35,272 1 10 | 2,39,023 10 7 | 2,74,295 12 5 | 1,92,241 0 0 | 82,054 12 5 |
| Arcot, South .. .. | Do. | 26,620 13 5 | 2,62,555 1 4 | 2,89,175 14 9 | 2,73,775 0 0 | 15,400 14 9 |
| Salem, North .. .. | Do. | 70,907 11 2 | 87,468 2 4 | 1,58,375 13 6 | 1,05,586 0 0 | 52,789 13 6 |
| Do. South .. .. | Do. | 80,853 6 0 | 74,760 5 7 | 1,55,613 11 7 | 1,21,151 0 0 | 34,462 11 7 |
| Trichinopoly *cum* Tanjore .. | Do | 28,765 7 2 | 1,92,727 7 0 | 2,21,492 14 2 | 2,11,797 0 0 | 9,695 14 2 |
| Madura .. .. .. | Do. | 14,582 11 0 | 1,15,427 14 8 | 1,30,010 9 8 | 1,02,580 0 0 | 27,430 9 8 |
| Tinnevelly *cum* Ramnad .. | Do. | 12,541 15 10 | 1,20,159 9 11 | 1,32,701 9 9 | 1,19,902 0 0 | 12,799 9 9 |
| | Total .. | 2,89,896 11 5 | 12,28,154 0 9 | 15,18,050 12 2 | 12,45,251 0 0 | 2,72,799 12 2 |
| *Western Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 241 0 0 | 241 0 0 | 241 0 0 | .. |
| South Canara .. .. | Do. .. | 32,240 3 6 | 1,45,787 1 11 | 1,78,027 5 5 | { 1,68,937 0 0 † 324 10 10 } | 8,765 10 7 |
| Malabar, North .. .. | Do. .. | 4,525 0 3 | 1,22,089 15 1 | 1,26,614 15 4 | { 1,14,927 0 0 † 76 14 0 } | 11,611 1 4 |
| Do. South .. .. | Do. .. | 424 14 6 | 1,35,680 3 10 | 1,36,105 2 4 | 1,34,186 0 0 | 1,919 2 4 |
| The Nilgiris .. .. .. | Do. .. | 5,493 5 3 | 1,01,476 11 10 | 1,06,970 1 1 | { 92,964 0 0 † 49 0 0 } | 13,957 1 1 |
| Kollegal .. .. .. | Do. .. | 648 15 0 | 92,347 9 0 | 92,996 8 0 | 91,755 0 0 | 1,241 8 0 |
| Coimbatore, North .. .. | Do. .. | 5,189 5 6 | 1,30,391 12 7 | 1,35,581 2 1 | 1,22,991 0 0 | 12,590 2 1 |
| Do. Central .. .. | Do. .. | 11,229 4 10 | 70,552 15 10 | 81,782 4 8 | 60,601 0 0 | 21,181 4 8 |
| Do. South .. .. | Do. .. | 1,359 2 6 | 1,26,499 2 10 | 1,27,858 5 4 | 1,25,461 0 0 | 2,397 5 4 |
| | Total .. | 61,110 3 4 | 9,25,066 8 11 | 9,86,176 12 3 | { ‡ 9,12,063 0 0 † 450 8 10 } | 73,663 3 5 |
| | Grand Total, Presidency. | 8,44,002 11 4 | 38,66,622 6 5 | 47,10,625 1 9 | 40,18,821 15 0 | 6,91,803 2 9 |

* Written off the accounts as per Board's Proceedings, Forest No. 638, Rout., dated 27th July 1914.
† Written off the accounts. ‡ Excludes Rs. 25 relating to the North Vellore Division of the Southern Circle.
(*a*) Includes Rs. 1,612 due in 1915-16; Rs. 1,075 covered by deposit.
(*b*) Do. 4,385 due in 1915-16.
(*c*) Do. 26,089 do.
(*d*) Do. 18,048 do.
(*e*) Do. 7615 do.
(*f*) Amounts written off.
(*g*) Deductions on account of erroneous demand.
(*h*) Corrected in the Board's office.
(*i*) Excludes Rs. 545 belonging to Parlakimedi Maliahs.
(*j*) Do. 10,980 do.
(*k*) Do. 11,625 do.
(*l*) Do. 10,975 do.
(*m*) Do. 550 do.

*Western Circle*)—Out of the total outstanding of Rs. 73,663-3-5 the amount actually due on or before 30th June 1915 was Rs. 14,029-12-0.

## ANNUAL FORM No. 83.

*Forest Department, Madras Presidency.*

FINANCIAL results of the year 1915–16.

| District. | Timber and other produce removed from the forests by Government Agency. | | Other Revenue. | | Formation, protecti on and improvement of forests. | Total. | |
|---|---|---|---|---|---|---|---|
| | Receipts. | Charges. | Receipts. | Charges. | Charges. | Receipts. | Charges. |
| *Northern Circle.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjam .. .. | (a) 25,350 | (b) 18,528 | (c) 77,537 | (d) 47,943 | (e) 33,248 | (f) 1,02,887 | (g) 99,719 |
| Vizagapatam .. .. | 11,655 | 11,519 | 34,630 | 32,498 | 7,352 | 46,285 | 51,369 |
| Godavari, Upper .. | 9,667 | 9,857 | 28,375 | 25,852 | 34,051 | 38,042 | 69,760 |
| Do. Lower .. | 4,084 | 7,116 | 2,15,124 | 65,606 | 21,595 | 2,19,208 | 94,817 |
| Kistna .. .. .. | 152 | 6,873 | 92,178 | 30,620 | 17,562 | 92,330 | 55,055 |
| Kurnool, East .. | 9,433 | 3,768 | 45,639 | 31,634 | 50,793 | 55,072 | 86,195 |
| Do. South .. | 18,848 | 7,208 | 77,615 | 45,287 | 46,237 | 96,463 | 98,732 |
| Do. West .. | 34,086 | 27,737 | 86,020 | 46,059 | 92,233 | 1,20,106 | 1,66,029 |
| Total .. | 1,13,275 | 92,606 | 6,57,118 | 3,25,499 | 3,03,071 | 7,70,393 | { 7,21,176 (h)10,314 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | 992 | 186 | 1,47,940 | 58,089 | 39,776 | 1,48,932 | 98,051 |
| Anantapur .. .. | 7 | .. | 1,74,889 | 51,696 | 40,056 | 1,74,896 | 91,752 |
| Guntur .. .. | 215 | 29 | 1,74,647 | 37,368 | 29,501 | 1,74,862 | 66,898 |
| Cuddapah, West .. | 617 | 201 | 60,273 | 32,507 | 19,738 | 60,890 | 52,446 |
| Do. East .. | 4,004 | 640 | 81,626 | 63,500 | 35,852 | 85,630 | 99,992 |
| Nellore .. .. .. | 17,804 | 3,568 | 2,55,709 | 64,184 | 36,480 | 2,73,513 | 1,04,232 |
| Chingleput .. * .. | 85 | .. | 60,251 | 23,414 | 19,230 | 60,336 | 42,644 |
| Chittoor .. .. | 103 | .. | 1,10,958 | 47,976 | 36,279 | 1,11,061 | 84,255 |
| Total .. | 23,827 | 4,624 | 10,66,293 | 3,78,734 | 2,56,912 | 10,90,120 | { 6,40,270 (h)+10,683 |
| *Southern Circle.* | | | | | | | |
| Vellore, North .. | 383 | 115 | 1,17,851 | 27,884 | 26,304 | 1,18,234 | 54,303 |
| Do. South .. | 65,505 | 5,604 | 1,26,476 | 46,016 | 28,997 | 1,91,981 | 80,617 |
| Arcot, South .. .. | 956 | 192 | 2,72,819 | 51,322 | 11,477 | 2,73,775 | 42,991 |
| Salem, North .. .. | 2,948 | 3,664 | 1,02,638 | 55,866 | 36,515 | 1,05,586 | 96,045 |
| Do. South .. .. | 816 | 1,190 | 1,20,335 | 34,596 | 31,656 | 1,21,151 | 67,442 |
| Trichinopoly cum Tanjore. | 1,258 | 1,064 | 2,10,783 | 39,605 | 26,526 | 2,12,041 | 67,195 |
| Madura .. .. | 391 | 158 | 1,02,190 | 53,136 | 67,413 | 1,02,581 | 1,20,707 |
| Tinnevelly cum Ramnad. | 758 | 585 | 1,19,144 | 47,974 | 34,957 | 1,19,902 | 83,516 |
| Total .. | 73,015 | 12,572 | 11,72,236 | 3,36,399 | 2,63,845 | 12,45,251 | { 6,12,816 (i)+ 10,117 |
| *Western Circle.* | | | | | | | |
| South Canara .. .. | 59,048 | 23,692 | 1,09,919 | 50,426 | 21,449 | 1,68,967 | 95,567 |
| Malabar, North .. | 79,097 | 20,200 | 35,860 | 31,976 | 40,683 | 1,14,957 | 92,859 |
| Do. South .. | 1,18,068 | 47,966 | 16,148 | 10,550 | 31,700 | 1,34,216 | 90,216 |
| The Nilgiris .. .. | 41,793 | 74,998 | 51,201 | 13,264 | 2,33,717 | 92,994 | 3,21,979 |
| Kollegal .. .. | 51,846 | 12,278 | 39,940 | 20,599 | 24,113 | 91,786 | 56,990 |
| Coimbatore, North .. | 62,391 | 16,248 | 60,630 | 33,642 | 51,787 | 1,23,021 | 1,01,677 |
| Do. Central .. | 867 | 1,293 | 59,764 | 30,073 | 22,801 | 60,631 | 54,167 |
| Do. South .. | 37,641 | 29,735 | 87,850 | 52,044 | 36,041 | 1,25,491 | 1,17,820 |
| Total .. | 4,50,751 | 2,26,410 | 4,61,312 | 2,42,574 | 4,62,291 | { 9,12,063 * 25 } | † 9,31,275 |
| Grand Total, Presidency. | 6,60,868 | 3,36,212 | 33,56,959 | 12,83,206 | 12,86,119 | 40,17,827 | 29,36,651 |

* Belongs to North Vellore division of the Southern Circle.

† Includes Refunds.

(a) Excludes Rs. 520 belonging to Parlakimedi Maliahs.
(b) Do. 242 do.
(c) Do. 14,958 do.
(d) Do. 23,887 do.
(e) Do. 5,026 do.
(f) Do. 15,220 do.
(g) Do. 29,155 do.
(h) Refunds and drawbacks.
(i) Refunds.

## ANNUAL FORM No. 84.

*Forest Department, Madras Presidency.*

STATEMENT of elephants and other live-stock during 1914–15.

PART I.

| District. | On hand at the commencement of the year. | | Number received during the year. | Number disposed of during the year. | On hand at the end of the year. | | Total expenditure on maintenance during the year. |
|---|---|---|---|---|---|---|---|
| | Number. | Value. | | | Number. | Value. | |
| **(1) ELEPHANTS.** | | | | | | | |
| *Northern Circle.* | | RS. | | | | RS. | RS. A. P. |
| Ganjam .. .. | (a) 3 | 5,450 | .. | .. | (a) 3 | (b) 5,450 | (c) 2,448 5 10 |
| Vizagapatam .. .. | 1 | 1,500 | .. | .. | 1 | 1,500 | 1,104 10 5 |
| Godavari, Upper .. .. | 1 | 900 | 1 | .. | 2 | 3,700 | 1,083 15 4 |
| Kurnool, West .. .. | 2 | 3,100 | .. | .. | 2 | 3,100 | 1,575 10 6 |
| Total .. | 7 | 10,950 | 1 | .. | 8 | 13,750 | 6,212 10 1 |
| *Central Circle*—Nil. | | | | | | | |
| *Southern Circles*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| South Canara .. .. | .. | .. | 8 | .. | 8 | 17,150 | 1,485 5 7 |
| Malabar, North .. .. | 27 | 69,500 | 6 | 14 | 19 | 46,400 | 11,234 7 7 |
| Do. South .. .. | 24 | 81,800 | 3 | 4 | 23 | 76,100 | 13,654 11 6 |
| The Nilgiris .. .. | 48 | 1,04,000 | 20 | 14 | 54 | 1,37,900 | 20,363 12 7 |
| Coimbatore, South .. | 16 | 43,000 | 2 | 3 | 15 | 44,100 | 9,680 4 2 |
| Total .. | 115 | 2,98,300 | 39 | 35 | 119 | 3,21,650 | 56,418 9 5 |
| Grand Total, Elephants. .. | 122 | 3,09,250 | 40 | 35 | 127 | 3,35,400 | 62,631 3 6 |
| **(2) OTHER LIVE-STOCK.** | | | | | | | |
| *Northern Circle.* | | | | | | | |
| Kurnool, South .. .. | 30 | 1,500 | .. | 20 | 10 | 1,500 | 903 0 0 |
| Do. West .. .. | .. | .. | 21 | 1 | 20 | | 1,260 10 10 |
| Total .. | 30 | 1,500 | 21 | 21 | 30 | 1,500 | 2,163 10 10 |
| *Central Circle.* | | | | | | | |
| Chittoor .. .. .. | 2 | 34 | 2 | .. | 4 | 113 | .. |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| South Canara .. .. | 26 | 1,285 | .. | 6 | 20 | 1,000 | 1,310 5 4 |
| Malabar, North .. .. | 2 | 200 | .. | | 2 | 200 | 463 12 10 |
| Do. South .. .. | 38 | 1,657 | .. | 12 | 26 | 1,026 | 2,629 13 2 |
| The Nilgiris .. .. | 15 | 900 | .. | 4 | 11 | 460 | 2,453 5 3 |
| Coimbatore, South .. .. | 39 | 1,970 | 18 | 14 | 43 | 3,421 | 6,072 9 2 |
| Total .. | 120 | 6,012 | 18 | 36 | 102 | 6,107 | 11,929 13 9 |
| Grand Total (Other Live stock), Presidency. | 152 | 7,546 | 41 | 57 | 136 | 7,720 | 14,093 8 7 |

(a) Excludes two elephants belonging to Parlakimedi Maliahs.
(b) Excludes Rs. 4,500 being the value of two elephants belonging to Parlakimedi Maliahs.
(c) Excludes Rs. 1,989 being the maintenance charges of the two elephants belonging to Parlakimedi Maliahs.

## Elephants gone off the list during the year 1914-15.

### Part II.

| District. | Names. | When purchased or otherwise obtained by Government. | Age. | How disposed of. |
|---|---|---|---|---|
| | | **Elephants gone off during the year.** | | |
| | | *Northern Circle*—Nil. | | |
| | | *Central Circle*—Nil. | | |
| | | *Southern Circle*—Nil. | | |
| | | *Western Circle.* | | |
| | | | Yrs. | |
| Malabar, North. | 1. Emily .. .. | Captured on 23rd June 1899 .. .. | 34 | Transferred to South Canara. |
| | 2. Meenakshi .. | Born in April 1889 .. .. .. .. | 27 | Transferred to South Canara. |
| | 3. Sivaji .. .. | Captured on 15th December 1900 .. .. | 42 | Killed by a wild tusker elephant. |
| | 4. Hanuman .. | Do. 21st February 1905 .. .. | 25 | Transferred to South Canara. |
| | 5. Parvathi .. | Born on 22nd November 1911 .. .. | 3 | Sold. |
| | 6. Kenchi .. | Captured on 12th March 1913 .. .. | 6 | Sold. |
| | 7. Sceptre .. | Do. 15th February 1914 .. .. | 6 | |
| | 8. Kumaran .. | Do. 11th April ,, .. .. | 7 | |
| | 9. Damayanti .. | Do. 28th ,, ,, .. .. | 26 | |
| | 10. Nala .. .. | Do. 28th ,, ,, .. .. | 3 | Transferred to the Nilgiris. |
| | 11. Dhrona .. .. | Do. 2nd May ,, .. .. | 9 | |
| | 12. Satyabhama .. | Do. 13th ,, ,, .. .. | 31 | |
| | 13. Valmiki .. | Do. 13th ,, ,, .. .. | 9 | |
| | 14. Narada .. .. | Do. 13th ,, ,, .. .. | 5 | |
| Malabar, South. | 1. Saraswathi .. | Do. 16th April 1914 .. .. | 23 | |
| | 2. Hyder Ali .. | Do. 12th March 1906 .. .. | 14 | |
| | 3. Bhagavathi .. | Do. 16th ,, 1913 .. .. | 21 | |
| | 4. Ganapathi .. | Do. 3rd ,, 1914 .. .. | 4 | |
| The Nilgiris. | 1. Joe .. .. | Do. 11th January 1909 .. .. | 17 | |
| | 2. Shah Jehan .. | Do. 12th May 1911 .. .. | 17 | |
| | 3. Menaka .. | Do. 4th July ,, .. .. | 6 | |
| | 4. Timur .. .. | Do. 3rd March 1912 .. .. | 6 | Sold. |
| | 5. Soma .. .. | Do. 6th June 1911 .. .. | 8 | |
| | 6. Clive .. .. | Do. 7th March 1913 .. .. | 4 | |
| | 7. Hastings .. | Do. 10th ,, ,, .. .. | 6 | |
| | 8. Moyar .. .. | Do. 13th April ,, .. .. | 8 | |
| | 9. Pykara .. . | Do. 24th ,, ,, .. .. | 4 | |
| | 10. Dupleix .. | Do. 19th ,, ,, .. .. | 8 | |
| | 11. Kantaraj .. | Do. 26th ,, 1914 .. .. | 2 | |
| | 12. Emperor .. | Do. 6th March 1909 .. .. | 15 | Transferred to South Canara. |
| | 13. Lawrence .. | Do. 7th ,, 1913 .. . | 5 | Transferred to South Malabar. |
| | 14. Sceptre .. | Do. 15th February 1914 .. .. | 6 | Died. |
| Coimbatore, South. | 1. Kalyani .. | Purchased on 4th October 1889 .. .. | 68 | Do. |
| | 2. Kapila .. .. | Captured on 29th June 1908 .. .. | 31 | Transferred to Upper Godavari. |
| | 3. Kaveri .. .. | Do. 25th October 1914 .. .. | 8 | Died. |

## ANNUAL FORM No. 85.

*Forest Department, Madras Presidency.*

ABSTRACT showing the value of stores, tools and plants for 1914-15.

| District. | Buildings. | | | | Stores. | | | | Total. | | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | In favour of the year. | Against the year. |
| | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | | |
| *Northern Circle.* | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | Rs. | Rs. |
| Direction .. | 1 | 740 | 1 | 1,600 | 333 | 3,352 | 418 | 2,879 | 334 | 4,092 | 419 | 4,479 | 387 | .. |
| Ganjām .. | 147 | 55,048 | 149 | 56,214 | (c)*2,488 | (d)*8,545 | (e)2,547 | (f)7,918 | 2,635 | 63,593 | 2,696 | 64,132 | (g) 539 | .. |
| Vizagapatam .. | 86 | 11,044 | 88 | 10,952 | * 1,351 | * 2,877 | 1,473 | 2,753 | 1,457 | 13,921 | 1,561 | 13,705 | .. | 216 |
| Godāvari, Upper. | 117 | 24,329 | 120 | 29,675 | 1,874 | 15,099 | 2,401 | 16,880 | 1,991 | 39,428 | 2,521 | 46,555 | (a)7,127 | .. |
| Godāvari, Lower. | 134 | 53,199 | 120 | 48,597 | 2,008 | 9,076 | 1,916 | 5,681 | 2,142 | 62,275 | 2,036 | 54,278 | .. | 7,997 |
| Kistna .. | 63 | 6,651 | 51 | 5,825 | 2,417 | 8,484 | 1,533 | 7,669 | 2,480 | 15,135 | 1,584 | 13,494 | .. | 1,641 |
| Kurnool, East. | 28 | 30,084 | 34 | 42,613 | 2,967 | 7,188 | 3,009 | 6,581 | 2,995 | 37,272 | 3,043 | 49,194 | 11,922 | .. |
| Do. South. | 76 | 42,209 | 82 | 47,701 | 4,303 | 11,338 | 3,819 | 10,221 | 4,379 | 53,547 | 3,901 | 57,922 | (a)4,375 | .. |
| Do. West. | *116 | *1,01,408 | 110 | 85,448 | * 5,820 | * 14,681 | 5,460 | 13,137 | 5,936 | 1,16,089 | 5,570 | 98,585 | .. | 17,504 |
| Total .. | 768 | 3,24,712 | 755 | 3,28,625 | 23,561 | 80,640 | 22,576 | 73,719 | 24,329 | 4,05,352 | 23,331 | 4,02,344 | .. | (b)3,008 |
| *Central Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 240 | 2,930 | 243 | 2,787 | 240 | 2,930 | 243 | 2,787 | .. | 143 |
| Bellary .. | 56 | 59,031 | 56 | 71,422 | 2,161 | 8,938 | 2,219 | 8,333 | 2,217 | 67,969 | 2,275 | 79,755 | 11,786 | .. |
| Anantapur .. | 36 | 45,708 | 38 | 52,687 | 1,875 | 6,606 | 2,000 | 6,300 | 1,911 | 52,314 | 2,038 | 58,987 | 6,673 | .. |
| Guntūr .. | 41 | 5,999 | 32 | 18,369 | 1,806 | 10,464 | 2,133 | 10,321 | 1,847 | 16,463 | 2,165 | 28,690 | 12,227 | .. |
| Cuddapah, West. | 40 | 12,169 | 37 | 15,407 | 2,269 | 7,759 | 2,219 | 7,087 | 2,309 | 19,928 | 2,256 | 22,494 | 2,566 | .. |
| Cuddapah, East. | 76 | 16,882 | 89 | 25,248 | 1,278 | 7,889 | 1,288 | 5,576 | 1,354 | 24,771 | 1,377 | 30,824 | 6,053 | .. |
| Nellore .. | 43 | 33,878 | 43 | 33,160 | 44,697 | 42,615 | 44,795 | 38,817 | 44,740 | 76,493 | 44,838 | 71,977 | .. | 4,516 |
| Chingleput .. | 41 | 11,218 | 33 | 10,034 | 1,707 | 5,348 | 2,474 | 12,040 | 1,748 | 16,566 | 2,507 | 22,974 | 6,408 | .. |
| Chittoor .. | 45 | 17,950 | 52 | 18,198 | 2,493 | 5,917 | 2,572 | 5,944 | 2,538 | 23,867 | 2,624 | 24,142 | 275 | .. |
| Total .. | 378 | 2,02,835 | 380 | 2,45,425 | 58,526 | 98,466 | 59,943 | 97,205 | 58,904 | 3,01,301 | 60,323 | 3,42,630 | 41,329 | .. |
| *Southern Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 159 | 2,934 | 178 | 2,715 | 159 | 2,934 | 178 | 2,715 | .. | 219 |
| North Vellore. | 40 | 10,910 | 44 | 19,783 | 1,546 | 5,641 | 1,656 | 5,843 | 1,586 | 16,551 | 1,700 | 25,626 | 9,075 | .. |
| South do. | 53 | 30,629 | 47 | 25,383 | 3,300 | 10,011 | 3,137 | 9,253 | 3,353 | 40,640 | 3,184 | 34,636 | .. | 6,004 |
| South Arcot .. | 35 | 19,400 | 39 | 21,132 | 1,475 | 3,089 | 1,431 | 3,143 | 1,510 | 22,489 | 1,470 | 24,275 | 1,786 | .. |
| North Salem .. | 85 | 41,928 | 88 | 43,286 | 1,931 | 7,529 | 2,397 | 6,400 | 2,016 | 49,457 | 2,485 | 49,686 | 229 | .. |
| South do. .. | 52 | 26,188 | 56 | 32,273 | 2,508 | 7,033 | 2,618 | 6,870 | 2,560 | 33,221 | 2,674 | 39,143 | 5,922 | .. |
| Trichinopoly .. | 35 | 16,751 | 30 | 20,782 | 3,481 | 10,239 | 3,054 | 8,722 | 3,516 | 26,990 | 3,084 | 29,504 | 2,514 | .. |
| Madura .. | 107 | 69,791 | 111 | 73,697 | 3,439 | 6,795 | 3,372 | 6,309 | 3,546 | 76,586 | 3,483 | 80,006 | 3,420 | .. |
| Tinnevelly .. | 83 | 43,955 | 83 | 47,870 | 1,929 | 4,866 | 1,907 | 4,703 | 2,012 | 47,921 | 1,990 | 52,573 | 4,652 | .. |
| Vernacular Training School. | .. | .. | .. | .. | 335 | 1,481 | 499 | 1,677 | 335 | 1,481 | 499 | 1,677 | 196 | .. |
| Special working plans office | .. | .. | .. | .. | .. | .. | 185 | 1,528 | .. | .. | 185 | 1,528 | 1,528 | .. |
| Total .. | 490 | 2,58,652 | 498 | 2,84,206 | 20,103 | 59,618 | 20,434 | 57,163 | 20,593 | 3,18,270 | 20,932 | 3,41,369 | 23,099 | .. |
| *Western Circle.* | | | | | | | | | | | | | | |
| Direction .. | 1 | 78 | 1 | 74 | 844 | 6,309 | 380 | 4,987 | 845 | 6,387 | 381 | 5,061 | .. | 1,326 |
| South Canara .. | 50 | 24,099 | 53 | 24,657 | 2,010 | 9,129 | 2,053 | 7,272 | 2,060 | 33,228 | 2,106 | 31,929 | .. | 1,299 |
| Malabar, North | 68 | 36,835 | 72 | 39,270 | 3,613 | 6,979 | 9,832 | 6,856 | 3,681 | 43,814 | 9,904 | 46,126 | 2,312 | .. |
| Do. South. | 40 | 34,505 | 46 | 39,907 | 1,591 | 5,270 | 1,640 | 5,713 | 1,631 | 39,775 | 1,686 | 45,620 | 5,845 | .. |
| The Nilgiris .. | 65 | 35,916 | 67 | 39,195 | 1,634 | 12,472 | 1,483 | 13,611 | 1,699 | 48,382 | 1,550 | 52,806 | 4,424 | .. |
| Kollegal .. | 34 | 28,224 | 35 | 28,733 | 4,696 | 7,663 | 4,833 | 6,618 | 4,730 | 35,887 | 4,868 | 35,351 | .. | 536 |
| Coimbatore, North. | 65 | 51,325 | 71 | 57,533 | 3,157 | 11,212 | 3,429 | 11,213 | 3,222 | 62,537 | 3,500 | 68,746 | 6,209 | .. |
| Do. Central | 57 | 21,694 | 55 | 24,036 | 7,654 | 8,338 | 7,665 | 8,404 | 7,711 | 30,032 | 7,720 | 32,440 | 2,408 | .. |
| Do. South. | 65 | 34,449 | 66 | 32,527 | 7,334 | 17,006 | 3,826 | 11,630 | 7,399 | 51,455 | 3,892 | 44,157 | .. | 7,298 |
| Vernacular Training School. | .. | .. | .. | .. | 330 | 1,083 | 328 | 1,267 | 330 | 1,083 | 328 | 1,267 | 184 | .. |
| Total .. | 445 | 2,67,119 | 466 | 2,85,932 | 32,863 | 85,461 | 35,469 | 77,571 | 33,308 | 3,52,580 | 35,935 | 3,63,503 | 10,923 | .. |
| Grand Total, Presidency. | 2,081 | 10,53,318 | 2,099 | 11,64,188 | 135,053 | 3,24,185 | 138,422 | 3,05,658 | 1,37,134 | 13,77,503 | 140,521 | 14,49,846 | 72,343 | .. |

* Correct figures furnished by the Collector.

(a) Corrected in the Board's office.

(b) Inserted in the Board's office.

(c) Excludes 563 items belonging to Parlākimedi Maliahs.

(d) Excludes Rs. 2,037 being the value of articles belonging to Parlākimedi Maliahs.

(e) Excludes 576 items belonging to Parlākimedi Maliahs.

(f) Excludes Rs. 2,303 being the value of articles belonging to Parlākimedi Maliahs.

(g) Excludes Rs. 266 in favour of the year on account of Parlākimedi Maliahs.

GOVERNMENT OF MADRAS.

## REVENUE DEPARTMENT.

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READ—the following paper:—

### Proceedings of the Board of Revenue (Land Revenue), Forest No. 161, dated 17th November 1915.

The Hon'ble Mr. H. F. W. GILLMAN, I.C.S.,

Commissioner of Land Revenue and Forests.

The Board submits to Government the progress report of Forest Administration in the Madras Presidency for the year ending 30th June 1915.

2. *Alteration in area.*—Some 44 square miles mostly in *South Malabar* (35 square miles) and *Vizagapatam* (eight square miles) were constituted reserved forests during the year.

There were also the following changes: (1) an increase of five square miles by rectification of boundaries in *Kistna*, (2) a decrease of 26 square miles by disafforestation of 11 square miles in *Kistna*, eight square miles in *Bellary*, two square miles in *Nellore* and five square miles in the districts of *Chingleput*, *Chittoor*, *North Vellore* and *South Arcot*, (3) a decrease of six square miles by correct computation of areas in *Nellore* and of three square miles on account of re-computation of areas of the reserves investigated by the Special Deputy Collector, Madura. The net result of these changes was an increase of 14 square miles in the total area of reserved forests which stood at 18,877 square miles at the close of the year. The area of reserved lands fell from 802 to 762 square miles. About four square miles were newly notified under section 4 of the Forest Act mainly in the districts of *Vizagapatam* (one square mile) and *Trichinopoly* (two square miles). Forty-four square miles were notified under section 16.

3. *Forest settlement.*—As in previous years, forest settlement work was mostly carried out by Revenue Divisional officers. Fourteen blocks covering an area of 498·98 square miles were pending settlement at the close of the year in the Northern Circle of which *Upper Gōdāvari* alone accounted for eight blocks with an area of 352 square miles. The area is large and the Collector is requested to issue instructions to the Revenue Divisional officers concerned to push on with the settlement work as rapidly as possible.

4. *Demarcation.*—The total length of boundaries at the close of the year was 36,990 miles (or 28 miles less than in the previous year) of which 1,772 miles do not require artificial demarcation The total length of artificially-marked boundaries at the close of the year was 34,644 miles of which 246 miles were demarcated for the first time during the year, against 221 miles in 1913–14. Five hundred and seventy-four miles remained still to be demarcated at the close of the year, principally in the districts of *Kollegal* and *Madura*. The length of old boundaries repaired during the year was 19,433 miles against 18,148 miles in the previous year, of which 12,400 miles were cleared by subordinates free of cost against 14,922 miles in 1913–14. The average cost per mile of fresh demarcation rose from Rs. 31–8–3 to Rs. 33–10–6, and the cost of repairs fell from Rs. 6-4–11 to Rs. 3–6–3. The cost of fresh demarcation increased in the Central and Southern Circles and the cost of repairs in the Western. These variations have not been explained. Conservators are requested to

see that explanations are given in future reports. The Special Deputy Collector appointed to re-investigate the settlement of certain reserves in the Palni hills completed his work on 6th February 1915. The demarcation of the new boundary between the *Nilgiris* and *Central Coimbatore*, the object of which is to transfer the lower half of the Nilgiri slopes to Central Coimbatore, was started in April last by an Extra Assistant Conservator of Forests specially appointed for the purpose. The work, which is reported to be of the most arduous character, is estimated to take about two years, and the Conservator states that as the Nilgiri railway has taken to using coal instead of wood, for the supply of which the scheme was started, he sees no advantage in carrying out the proposed transfer. A separate report is being called for in the matter.

5. *Surveys.*—The Survey of India surveyed topographically on the 2 inch 1 mile scale about 66 square miles in *South Vellore*. In accordance with the decision of the Board of Forestry that only the more valuable forests where comparatively intense working is required should be surveyed on the 4″ scale, the Government of India have called for final lists of the forest areas in this Presidency which are to be so surveyed. Now that the classification of forests according to the Forest Committee's report is nearly complete, Conservators of Forests have been requested to compile lists of the forests placed in the classes I and II for which a special survey is required, distinguishing between those which have been already surveyed on the 2″ scale and those which have not been surveyed but including only those areas for which maps on the 2″ scale are considered inadequate. The receipt of these lists is awaited. The Special Map officer, Mr. Descubes, completed the maps of *Ganjām*, *Kistna* and *Nellore* and prepared those of *Vizagapatam*, *Lower Gōdāvari*, *Guntūr* and *North Malabar*. He has yet to prepare the map of *Upper Gōdāvari* and re-draw the maps of *Cuddapah*, *Salem*, *Madura*, *Rāmnād* and *Tinnevelly* with reference to the alteration of the boundaries of forest divisions.

The index map of the Madras Presidency showing the limits of controlling and executive charges prepared by the Forest Map officer, Dehra Dun, was published during the year. It is stated that the maps of *South Canara* and *North Coimbatore* were published during the year, that the map of *South Malabar* will shortly be printed and that the Nilgiri map which was reported last year to be in the press has not yet appeared.

Mr. Curtis of the Madras Survey department surveyed 12 square miles of the Estates on the Anamalais. In G.O. Mis. No 1007, Revenue, dated 29th April 1915, the period of his deputation was extended up to the 15th June 1915. The work that still remains to be done is expected to take two more seasons.

Miscellaneous work such as survey of coupes, alignments of roads and fire lines, verification of boundaries, determination of village boundaries in panchayat areas, and preparation of coupe and working plan maps was done by departmental surveyors.

## Management of Forests.

### (1) *Regulation and management.*

6. *Working plans.*—Working plans covering an area of 329 square miles were sanctioned during the year and plans were under preparation or revision for 2,921 square miles. The position in regard to working plans is unsatisfactory as a large proportion of those previously sanctioned are either unworkable or out of date and need revision while there is still a huge area of forest, 6,650 square miles, for which no working plans have as yet been attempted. The best progress was made in the Southern Circle where a special working plans officer and establishment were entertained and worked throughout the year. Mr. C. C. Wilson, the Working Plans officer, prepared working plans for the sandal forests of the Chitteris which was sanctioned during the year and of the Javadis which was sanctioned after the close of the year. The latter plan which was based on a complete enumeration of all the sandal trees in the area, is the best of its kind that has ever been made and has revealed the enormous potential value of this sandal forest. Mr. Wilson also prepared reconnaisance reports for

sandal forests in *North Salem* and fuel areas in *Madura* all of which have been approved by the Conservator. There was no working plan staff in any of the other circles and as the preparation of plans had to be attended to by the District Forest officers in addition to their other duties, the outturn was only moderate. In the Northern Circle a preliminary working plan for the forests of the Bhadrāchalam range in the *Upper Gōdāvari* division was sanctioned during the year but otherwise little progress was made. The preliminary working plans for Marrigudem range and for the Rajahmundry and Polavaram ranges in the *Lower Gōdāvari* division have been returned to the Conservator for revision with reference to the final classification of forests in that division. In the Central Circle useful plans were sanctioned for the red sanders forests in *East Cuddapah* and *Chittoor*. There is a good deal to be done in other districts of this Circle especially *Bellary* and *Guntūr* where there are no working plans in operation and *West Cuddapah* where the existing plans are useless. In the Western Circle Mr. Cox completed an elaborate plan for the Eucalyptus plantations on the *Nilgiris* which was sanctioned. Much other preliminary work was got through but there is still enough in this Circle to occupy a working plans section for many years especially in *South Canara* and the *Coimbatore* Forest divisions Mr. Hart, Extra Assistant Conservator of Forests is reported to have prepared a working scheme for the extraction of over-mature timber in the ghat forest exploitable by the Kasaragod river.

7. The Board recognises the great importance of compiling plans with as little delay as possible for all areas for which they are required and in the proposals for the re-organisation of the Forest department which it is about to submit to Government, provision has been made for a working-plans officer for each circle.

(2) *Communications and Buildings.*

8. The following statement compares the expenditure during the year on the construction and maintenance of roads, bridges and buildings in the four circles with that of the previous year:—

| | Roads and bridges. | | Buildings. | |
|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| | Rs. | Rs. | Rs. | Rs. |
| Northern Circle .. .. .. | 31,588 | 32,333 | 43,789 | 37,216 |
| Central Circle .. .. .. | 11,764 | 15,670 | 37,122 | 33,510 |
| Southern Circle .. .. .. | 41,120 | 29,913 | 56,803 | 42,577 |
| Western Circle .. .. .. | 45,251 | 47,303 | 39,890 | 41,466 |
| Total .. | 1,29,723 | 1,25,219 | 1,77,604 | 1,49,769 |

The total expenditure on roads and bridges fell by Rs. 4,504 and that on buildings by Rs. 27,835. The decreased expenditure is due to the restriction of allotments owing mainly to the war. The Board has tentatively approved since the close of the year schemes for the construction of roads and buildings prepared by the Conservators of Forests in accordance with Mr. Beadon Bryant's recommendations. In November 1914, Messrs. A. J. Bright and F. J. Marshall were appointed temporary Engineers for the investigation and execution of forest roads and were engaged, the former on the Mount Stuart ghat road and on the Tekkadi tram trace and the latter on the survey of a road from Alangayam to Patrakad in the Javadis hills. All these works present considerable engineering difficulties and are of prime importance for the exploitation of teak in Mount Stuart and sandal and bamboos on the Javadis. No work beyond re-tracing and estimating was done by either of the temporary Engineers. Considerable progress was made in opening up the red sanders forests of *East Cuddapah* and *Chittoor* with cart-tracks and bridle-paths.

The tramway in *Coimbatore* was extended and worked at a profit of Rs. 2,416 against a loss of Rs. 754 in the previous year. The outturn of work was greater while the working charges appreciably decreased. The tramway in Nellore was not used departmentally but was lent to fuel contractors on terms provided in the felling

contracts. In the Sriharikota range only 609 tons of fuel were carried against 7,602 tons in the previous year owing to the failure of the felling contractor to carry out his agreement.

9. *Miscellaneous works.*—The expenditure under this head also decreased from Rs. 29,111 to Rs. 16,767. The chief works consisted as usual in fencing compounds and reserves and construction of, and repairs to, tanks and wells.

(3). *Protection of forests.*

10. The following table compares the forest offences reported during the year with those of 1913–14 and with the average of the three years ending 1913–14 :—

| — | Injury to forests by fire. | | Unauthorized felling and removal of forest produce. | | Unauthorized grazing. | | Other offences. | | Total. | | Average for three years ending 1913-14. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | 1913-14. | 1914-15. | |
| A. Cases taken to Court. | 54 | 27 | 3,969 | 4,069 | 1,835 | 2,021 | 404 | 389 | 6,262 | 6,506 | 5,719 |
| B. Cases compounded. | 76 | 62 | 15,532 | 15,864 | 6,937 | 7,112 | 1,059 | 1,087 | 23,604 | 24,125 | 22,654 |
| C. „ undetected .. | 1,056 | 788 | 577 | 716 | 261 | 362 | 17 | 44 | 1,911 | 1,910 | 1,848 |
| Total .. | 1,186 | 877 | 20,078 | 20,649 | 9,033 | 9,495 | 1,480 | 1,520 | 31,777 | 32,541 | 30,221 |

It will be seen that the total number of offences reported is 764 more than in the preceding year and 2,320 more than the average for the three preceding years. The number of offences in the Southern Circle is 44 per cent. and in the Central Circle 33 per cent. of the total. Forest crime is heaviest in the *South Arcot*, *Trichinopoly*, *Madura*, *Guntūr*, *Nellore*, *two Vellores* and *Chingleput* districts which return between them half of the total offences for the Presidency. The bulk of the reserved forests in these districts except *Madura* and *South Vellore* are scattered, of comparatively small area and contiguous to villages and cultivation. *South Arcot*, *Chingleput*, *Nellore* and *Trichinopoly* in particular are peppered all over with small reserves. This fact in itself is sufficient to explain the undue prevalence of forest crime in these districts. In the *Vellores*, there are many scattered reserves, while in *Madura* the steady denudation of zamindari forests and heavy demand for manure leaves for the Periyar area are causes which conduce to extensive illicit removals from the Government reserves. The measures already taken that will tend to reduce forest crime are the disafforestation of useless reserves and the transfer of grazing forests to panchayat management. These innovations which were commenced at the beginning of 1914 in consequence of the Forest Committee's report are being steadily introduced but will take a long time to carry through to completion and will affect reserves of minor importance only. They are not applicable to the more valuable forests where the prevention of crime cannot be tackled seriously until the department has been reorganised and unless some method can be devised of securing the co-operation of the people living in and adjacent to the forests in forest conservancy. The Board has recently laid before Government its conception of the measures that may advantageously be adopted to secure their co-operation.

11. The increase in the number of offences reported occurred under all heads except "injury to forests by fire". The number of offences of "illicit felling" and "illicit grazing" increased by 2·8 and 5·1 per cent. respectively. The increase in the number of offences under the former head occurred mainly in the districts of *Anantapur*, *Cuddapah*, *South Vellore*, *Trichinopoly* (in unreserves) and in *Madura*, while that under the latter head occurred chiefly in the districts of *Anantapur*, *Chingleput*, *South Vellore*, *South Arcot* and *South Salem*. The increase in the number of "other offences" is small and calls for no remarks. The number of cases of injury to forests by fire fell by 26 per cent.; the decrease, which was spread over all districts except *Ganjām* and *Kurnool*, was specially marked in the Western Circle.

As usual offenders responsible for the majority of fires were not detected. Detection was poor in *Ganjām*, *Kurnool West* and *South*, *Anantapur*, *Madura* and *South Canara*.

12. The percentage of cases taken to court, compounded and undetected to cases reported was 19·99, 74·14 and 5·87 against 19·70, 74·29 and 6·01 in the previous year. The total number of cases disposed of by courts rose from 6,401 to 6,737 and the percentage of acquittals to cases prosecuted slightly increased from 7·5 to 7·9.

The number of offences compounded by District Forest officers and Revenue Divisional officers was about the same as in the preceding year, but the amount of compensation fees realized fell from Rs. 2,14,180 to Rs. 2,08,959. The average per case was Rs. 9–13–5 against Rs. 10–1–4 in the previous year.

13. The rules laid down by Government in G.O. No. 1990, Revenue, dated 13th June 1910, and No. 3958, Revenue, dated 14th December 1910, for the guidance of forest officers in compounding offences of illicit grazing have worked satisfactorily in all districts.

14. The closure of forests to grazing as a punishment for systematic offences on a large scale was not considered necessary in any district except *Tinnevelly*, *Chittoor* and *Nellore*.

15. Rewards amounting to Rs. 2,023 were granted to informers and forest subordinates against Rs. 890 in the previous year. It is reported that rewards were sanctioned in two cases in *North Salem* division but the amount is not specified. This information should be given in future reports.

16. *Protection from fire.*—The system of fire protection adopted in most districts was the same as in the previous year, viz., the clearing of exterior and interior fire lines and patrol by watchers. The system adopted in *South Kurnool* division in the previous year of clearing fire lines through the agency of purchasers of the felled trees was tried in *Kurnool West*, but found unsuitable. In the matter of protection, the results show an appreciable improvement over the previous year. In areas over which special protection was attempted the percentage of failure materially decreased from 11·57 to 6·6, only 409 out of a total of 6,193 square miles attempted having been burnt. The cost per square mile successfully protected was Rs. 23–9–8 against Rs. 22–8–8 in the previous year. The excellent results obtained in *North* and *South Vellore* and *North Salem* deserve special notice as they are attributed to the co-operation of Malayalis who live on the Javadi and Chitteri hills. The measures taken to secure the co-operation of the khonds in *Ganjām*, the Koyas and Reddis in *Upper Gōdāvari*, and the hill tribes in *Lower Gōdāvari* and *South Coimbatore* divisions to protect the forests from fire in return for rewards and grazing concessions are also said to have produced satisfactory results. The system of the grant of rewards to the Chentsus in *Kurnool* has recently been condemned by the special officer and the Collector and the matter is now under the consideration of the Board. In addition to the areas under special protection, the ordinary staff attempted to protect 9,336 square miles against 9,096 square miles in the previous year of which 9,069 square miles were successfully protected.

17. The following statement compares the number and the origin of the fires which occurred during the year with those of the preceding year :—

| | 1913-14. | | 1914-15. | |
|---|---|---|---|---|
| | Number. | Area in acres. | Number. | Area in acres. |
| Fires originating in departmental fire conservancy operations. | 81 | 17,065 | 88 | 20,161 |
| Fires crossing exterior fire lines .. .. .. .. | 183 | 226,029 | 174 | 164,934 |
| Fires due to carelessness or accident .. .. .. .. | 383 | 82,084 | 253 | 35,151 |
| Fires originating from intention or malice .. .. .. | 341 | 137,126 | 421 | 141,917 |
| Fires due to unknown causes .. .. .. .. .. | 762 | 253,976 | 457 | 92,110 |
| Total .. | 1,750 | 716,280 | 1,393 | 454,273 |

The number of fires and area burnt show a satisfactory decrease. The area maliciously fired was however greater than in the previous year in the *Kurnool East* and *South*, *Bellary*, *Anantapur*, *Cuddapah East* and *West* and *South Coimbatore* divisions. In cases of malicious firing detected in *North Salem*, *Tinnevelly* and *Trichinopoly*, the offenders were successfully prosecuted. The valuable forests in *North Malabar* and the Mudumalais in the *Nilgiris* which suffered severely last year were successfully protected. The results in three out of the four forest divisions in *Coimbatore* were unsatisfactory, nearly 90 per cent. of the fires in the Western Circle having occurred in those divisions alone. The three *Kurnools* were responsible for 31 per cent. of the fires in the presidency. The worst fire of the year was one which is said to have entered the Gudem range in *East Kurnool* from the *West Kurnool* division at four places and could not be controlled for nearly four days.

18. The Board regards the information about fire conservancy given in Circle reports as of little value and is now considering a suggestion made by Mr. Cox that special annual reports on this subject with fire maps attached should be submitted from every district in August and reviewed by the Board.

19. *Protection from cattle.*—3,380 square miles or 17 per cent. of the total area of reserved forests and reserved lands (19,639 square miles) were closed to all animals throughout the year and 102 square miles for part of the year against 3,242 and 104 square miles respectively in the previous year. 218 square miles of reserved forests and reserved lands were open to goats against 387 square miles open last year. Goats were completely excluded from the forests in the Northern, Southern and Western Circles and in the Central Circle the number is decreasing in accordance with the arrangement which gave the goat owners three years grace in which to reduce or dispose of their flocks. Goats alone were excluded over an area of 15,292 square miles and goats and sheep over 647 square miles against 15,169 and 763 square miles respectively. A grazing scheme for *the Nilgiri* district sanctioned in G.O. No. 1943, Revenue, dated 6th July 1914, was brought into force in the district during the current year. A grazing scheme for the *Guntūr* district was approved by Government in July last and is to take effect from the current forest year. In their Memorandum No. 833-E/15-2, Revenue, dated 10th June 1915, Government have decided to defer passing orders on the Udumalpet grazing scheme pending settlement of the general principles on which grazing in future is to be dealt with.

The total number of animals licensed to graze on payment rose from 3,875,000 to 3,898,811 and the number of cattle impounded from 190,714 to 208,393. The Conservator, Southern Circle, gives an interesting table to show the grazing incidence in each district based on the actuals of grazing permits and states that the large area open to grazing is undoubtedly the cause of much of the offence which takes place and that the forests have very little chance of improvement. The Conservator, Central Circle, also states that the general incidence of grazing is far too high to permit improvement of the forests in many parts of the Circle.

20. *Protection against injuries from natural causes.*—Spike disease continued its attacks upon sandal in *North Salem*, *Trichinopoly*, *Kollegal* and *North Coimbatore* and is reported to have spread throughout the working circles in the two latter divisions. Signs of spike are said to have been found at Kuttalam but the observation is yet to be confirmed. Measures are being taken to check the spread of spike in *Kollegal* but it is too early to judge of their efficacy. Several plantations in Nilambur range and the young plantations of Nedungayam suffered severely from teak defoliators; the experiments tried with two Andre Maire traps were unsuccessful; one of the traps was soon destroyed by elephants, and the other was probably not correctly adjusted as it failed to attract moths. In *Lower Gōdāvari* the casuarina trees attacked by root fungus in the Kandikuppa plantation were at once removed and sold. The campaign against lantana was continued as usual with no definite results. Damage by sambhur was noticed especially near Mundanthorai in *Tinnevelly* where they are numerous but the sambhur themselves have recently been found dying off in large numbers from a foot affection.

(4) *Sylviculture.*

21. *Natural reproduction.*—The year was on the whole favourable for natural reproduction. Important species seeded well and progress was marked in protected areas and areas closed to grazing. Sandal is spreading rapidly in this way in the known sandal tracts as the birds carry the seeds. The Conservator of Forests, Southern Circle, made the interesting discovery during a tour in the Javadi hills, in *North Arcot*, that germination takes place in August. Reproduction of red sanders from coppice in *Cuddapah* and *Chittoor* districts is excellent. The seeding of the larger bamboo (*Bambusa arundinacea*) is spreading over wide areas in *South Canara*, *Malabar* and *Coimbatore* and the *Nilgiris* and if the partial seeding is followed, as is probable, by a general seeding, it will be a serious thing later for the timber floating industry and interfere for some years with any bamboo pulping schemes.

22. *Artificial reproduction.*—765 acres were added and 3,277 acres were excluded from the area of regular plantations, showing a net decrease of 2,512 acres, the corresponding decrease in the previous year being 1,957 acres. Cultural operations were carried on over an area of 3,207 acres at a cost of Rs. 5,861 against 9,002 acres at a cost of Rs. 20,237, the decrease being general in all the circles. Following the policy recommended by Mr. Beadon Bryant, Inspector-General of Forests, in 1913, expenditure on artificial reproduction is being steadily reduced. It has decreased from Rs. 1,49,985 in 1912–1913 and Rs. 87,418 in 1913–1914 to Rs. 63,369 in the year under report. Of this no less than Rs. 35,380 was spent on teak plantations in *West Kurnool* division mainly with the object of finding employment for the Chentsus and thus keeping them from forest crime. These plantations have now practically reached their limits and very little further planting will be done. They are not likely to prove a profitable investment and part of the expenditure on them should properly be regarded as made in the interests of law and order and not of the forests. The figures given in Form No. 75 in the Southern Circle report are reported to be misleading and full of inaccuracies. This is probably true in the case of other circles also. The Conservator, Southern Circle, reports that the numerous plantations and topes attached to bungalows are shown in some districts as " regular plantations ", in a few other districts as " taungya " and in some others under " cultural operations "; he has suggested that an additional heading ' topes ' should be opened in the return, under which bungalow plantations may be shown. His suggestion has been referred to the other Conservators for remarks.

23. *Operations for the improvement of growing stock.*—The operations undertaken during the year consisted as in previous years of improvement fellings, thinnings, fencing, creeper cutting, removal of inferior species, dead and dying trees, parasites and noxious growth and weeds. The Conservator, Central Circle, remarks that provided the coupes can be subsequently protected from cattle there is no better preliminary method of restoration than that of cutting back the degraded scrub jungle which forms so large a portion of the forest area in the circle. Stone walling which is by far the most effective method of protection from trespass was carried out in *Bellary*, *Anantapur* and *Cuddapah* but as the cost was prohibitive it had to be abandoned in the first two of these divisions.

24. *Experiments.*—Successful experimental cultivation was carried out in the following districts.

*Sandal* in *Vizagapatam* and *Kistna*; *Swietenia Mahogani* in *Vizagapatam*, *Cuddapah* and *South Malabar*; *Dalbergia sissoo* in *Bellary* and *North Vellore*; *Pterocarpus Santalinus* in *Ganjām*, parts of *Kurnool* (*South*), *North Vellore* and *South Arcot*; *Swietenia Macrophylla* in *Malabar*; *Eucalyptus* in *Vizagapatam*; *Divi Divi* in *Gōdāvari Upper*; *Ceara rubber* in *Ganjām*; *Para rubber* in *Vizagapatam*; *Hardwickia binata* in *North Vellore* and *Edible date* in *Gōdāvari Upper*. The eleven varieties of Eucalyptus planted in the arboretum in Cairn Hill reserve, *Nilgiri* district, referred to in the previous year's report are reported to show very slow growth.

The following are other experiments conducted during the year:—

(1) Lac inoculation in *Kurnool West*, on certain varieties of trees with the aid of stick lac obtained from the Central Provinces.

(2) Mulberry cultivation started at Bairluti and Pecheruvu in *Kurnool West*. Both these experiments were undertaken principally with the object of providing permanent work for the Chentsus.

(3) Test of annual increment of tree growth—*Lower Gōdāvari* division.

(4) Test of the cost of floatage of dry bamboos in connection with Mr. Nelson's bamboo pulp scheme and of the effect of different felling methods on regeneration.

### (5) *Exploitation.*

25. *System of management—Major produce.*—The various methods of the exploitation of major produce were, as in previous years, clear or regeneration fellings, thinnings, selection fellings, improvement fellings and coppice fellings. Clear or regeneration fellings were carried on mostly in *Gōdāvari Lower*, *Kistna*, *Kurnool West* and *South Arcot* and *Tanjore*. Thinnings were carried out in *Gōdāvari Lower*, *Kurnool East* and *West*, selection fellings were made as usual in timber coupes or where it was found necessary to eliminate dead and unsound trees. In the Southern Circle however only three coupes were worked under this system. Improvement and coppice fellings were undertaken principally in fuel coupes and in a few timber coupes and bamboo areas. Unregulated fellings under the permit system were made in Rampa in *Lower Gōdāvari* and in some unreserves. In reserves this antiquated system was chiefly confined to the extraction of bamboos in *Vizagapatam*, *Gōdāvari Upper* and *North Malabar*, of dead and wind blown trees in certain reserved forests of *South Malabar* of small timber and fuel in the *Nilgiris*, and of selected and marked timber for domestic requirements in two ranges of *Madura*.

26. *Minor produce and fodder greas.*—Minor produce was generally leased out. The manufacture of Catechu in *South Canara* and collection of miscellaneous produce in *North Coimbatore*, *Kollegal* and *Trichinopoly*, and in parts of the *Nilgiris*, *South Coimbatore* and *Nellore*, were carried out by departmental agency. Permits were issued in several districts for the removal of manure leaves, stones, gravel, etc. In the *Kurnools*, Chentsu agency was employed for the collection of minor produce. In *Ganjām*, the enjoyment of fruit trees in the majority of cases was left free to the Khonds. Fodder grass was removed on permit in *Madura*, *South Malabar* and *Coimbatore* and leased in *Gōdāvari* (*Lower*) and *Kistna*. In *Tinnevelly* grass was as in previous years included in minor produce leases. Ryots were allowed to cut and remove grass free from reserves in the three *Kurnools*, *Cuddapah*, *Chittoor*, *Nellore*, *Bellary*, *North* and *South Vellore*, *South Arcot* as also in *Anantapur* where however the concession was temporarily withdrawn in certain areas because the neighbouring villagers did not help in putting out fires. In *Bellary* 240 tons of hay were cut by a contractor against 250 tons in the previous year. The Military Department held leases of areas in *Bellary*, *Anantapur*, *East Cuddapah*, and *Vellore North* at Rs. 2 per ton of hay removed.

27. *Hay-making.*—Experimental hay-making operations in *East Cuddapah* and *Guntūr* referred to in the previous year's report, were abandoned. It was considered unnecessary for the Forest Department to continue these operations as the Military grass farms have for years been devoted to this industry.

28. *Grazing.*—The revenue from grazing and fodder grass, Rs. 6,96,334 was higher than in the previous year by Rs. 14,441. The increase in the Central Circle was due to a rise in the grazing revenue consequent on the imposition of enhanced fees for goat browsing in *Bellary*, to the extension of the Kancha system in *Nellore*, and to the increased number of grazing licenses issued in the upland taluks in *Guntūr*. The increase in the Western Circle was due to the introduction of the block system in the *Nilgiris*, to a larger number of foreign cattle licensed in *Kollegal* and to an increased demand for fodder grass in *North Coimbatore*. The other two circles showed a decrease; in the Southern Circle it was due to closure of reserves to goat browsing in *North Vellore*, *North Salem* and *Madura*, and in the Northern Circle chiefly in *Kistna* to the abolition of the parcellaire system, closure of reserves to goat browsing, closure to all animals of certain reserves under the provisions of working plans and to disafforestation of some reserves.

29. *Agency of exploitation.*—The subjoined table compares the outturn through all agencies of timber, fuel, bamboos and minor produce with that of the preceding year :—

| Agency of exploitation. | | Timber including sandal wood in cubic feet. | | Fuel in cubic feet. | |
|---|---|---|---|---|---|
| | | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| (1) | | (2) | (3) | (4) | (5) |
| By Government Agency. | Northern Circle .. .. | 280,305 | 250,028 | 1,459,059 | 868,935 |
| | Central ,, .. .. | 20,567 | 11,071 | 100,896 | 36,063 |
| | Southern ,, .. .. | 21,605 | 19 338 | 64,207 | 62,294 |
| | Western ,, .. .. | 256,604 | 437,121 | 1,634,965 | 640,149 |
| | Total .. | 579,081 | 717,558 | 3,259,127 | 1,607,441 |
| By purchasers.. | Northern Circle .. .. | 1,813,9 8 | 1,288,226 | 3,877,747 | 4,459,851 |
| | Central ,, .. .. | 1,5-5,381 | 1,065,163 | 5,688,506 | 6,584,517 |
| | Southern ,, .. .. | 964,871 | 920,866 | 6,579,693 | 4,777,552 |
| | Western ,, .. .. | 370,524 | 468,886 | 2,532,559 | 3,937,306 |
| | Total .. | 4,734,744 | 3,743,141 | 18,678,505 | 19,759,226 |
| By right holders | Northern Circle .. .. | 189,507 | 184,136 | 792,444 | 582,195 |
| | Central ,, .. .. | .. | .. | .. | .. |
| | Southern ,, .. .. | .. | .. | .. | .. |
| | Western ,, .. .. | 49,077 | 36,175 | .. | .. |
| | Total .. | 238,584 | 220,311 | 792,444 | 582,195 |
| By free grantees | Northern Circle .. .. | 48,304 | 86,853 | .. | .. |
| | Central ,, .. .. | 84 180 | 38,543 | .. | .. |
| | Southern ,, .. .. | 47,810 | 90,493 | 26,689 | 3,984 |
| | Western ,, .. .. | 8,390 | 3,761 | 3 415 | 340 |
| | Total .. | 188,684 | 219,650 | 30,104 | 4,324 |
| | Grand total .. | 5,741,093 | 4,900,660 | 22,760,180 | 21,953,186 |

| Agency of exploitation. | | Bamboos. | | Minor produce including grass and grazing value in rupees. | |
|---|---|---|---|---|---|
| | | 1913-14. | 1914-15. | 1913-14. | 1914-15. |
| | | (6) | (7) | (8) | (9) |
| By Government Agency. | Northern Circle .. .. | 10,317 | 6,550 | 10,750 | 12,844 |
| | Central ,, .. .. | 196 | 226 | 18,941 | 14,701 |
| | Southern ,, .. .. | 277 | 201 | 706 | 531 |
| | Western ,, .. .. | 9,492 | 5,373 | 28,229 | 24,151 |
| | Total .. | 20,282 | 12,350 | 58,626 | 52,227 |
| By purchasers.. | Northern Circle .. .. | 61,539 | 93,180 | 2,43,438 | 2,13,695 |
| | Central ,, .. .. | 11,060 | 14,945 | 6,92,586 | 6,31,218 |
| | Southern ,, .. .. | 112,914 | 101,789 | 4,29,093 | 3,82,215 |
| | Western ,, .. .. | 28,287 | 22,114 | 1,44,205 | 1,47,014 |
| | Total .. | 213,800 | 232,028 | 15,09,322 | 13,74,142 |
| By right holders | Northern Circle .. .. | 330 | 552 | 24,649 | 24,649 |
| | Central ,, .. .. | .. | .. | 150 | 151 |
| | Southern ,, .. .. | .. | .. | 2,389 | 2,105 |
| | Western ,, .. .. | 12 | .. | 856 | 780 |
| | Total .. | 342 | 552 | 28,044 | 27,685 |
| By free grantees | Northern Circle .. .. | 454 | 671 | 78 | 2,836 |
| | Central ,, .. .. | 230 | 246 | 2,457 | 1,320 |
| | Southern ,, .. .. | 46 | 303 | 3,677 | 5,267 |
| | Western ,, .. .. | 169 | 67 | 470 | 270 |
| | Total .. | 899 | 1,287 | 6,682 | 9,693 |
| | Grand total .. | 235,323 | 246,217 | 16,02,674 | 14,62,747 |

30. There was a decrease in the output under all heads except bamboos. The increased outturn of timber from departmental working in the Western Circle was chiefly in the two divisions of *Malabar*, due to the exploitation of a larger area in the Begur Working Circle and to a larger yield from thinnings and wind-blown trees in teak plantations, and in the *Nilgiris* to the improvement fellings carried out in the Mudumalai Working Circle. The other three circles showed a decrease. Similarly timber removed by purchasers decreased, in all the circles, except the Western. The decrease was due in the Northern Circle to a lack of demand, in the Central to smaller removals from darkhast lands and in the Southern to a fall in the collection of tree value from lands assigned on darkhasts in *Madura* and *Tinnevelly* and also to the non-sale of timber coupes in *Madura*. The increase in the Western Circle was due mainly to extensive sales of trees on darkhast lands chiefly in *South Canara*.

The quantity of fuel extracted by departmental agency decreased in all the circles and the quantity removed by purchasers increased in all the circles except the Southern. In the Southern Circle the decrease in the output was due chiefly to the sale of a lesser number of coupes in *North Vellore*, *North Salem*, *Trichinopoly* and *Madura* and to the limited sale of trees on tank beds in *Madura* and *Tinnevelly*.

31. The value of bamboos extracted by departmental agency decreased in all the circles except the Central. The increase in the latter was due to a greater number of bamboos exploited for departmental purposes in *Bellary* and *East Cuddapah*. The value of bamboos removed by purchasers increased in the Northern and Central Circles; but this was counterbalanced by a decrease in the other circles. The decrease in the Southern Circle is due to the comparatively poor yield from coupes leased in *North Vellore*, to the failure of certain bamboo contractors in *North Salem* to pay the instalments due in time, and to the major portion of sale amounts of 1914–15 having been paid in the latter part of the previous year in *Trichinopoly*. The number of bamboos removed by purchasers increased by nearly 53 per cent. in the Western Circle mainly in *South Canara* due owing to the sale of coupes to contractors. The price however was lower but no explanation has been given of the fall.

32. The value of *minor produce* extracted by departmental agency decreased in all the circles except the Northern. In the Central Circle the fall is due to the failure to sell the Nux-vomica crop in *Nellore*, in the Southern to the extension of the contract system of working and in the Western to a poor crop of gallnuts, honey, etc, in *North Coimbatore*. The value of minor produce removed by purchasers decreased in all the circles except the Western. The decrease in the Northern Circle has not been explained. It was due in the Central Circle to the smaller collection of tangedu bark in *Bellary* and to the very marked fall in the demand for mica in *Nellore* owing to the war, and in the Southern to the stoppage of the trade in barks for the same reason, to the closure of reserves to goat browsing in *North Vellore*, *North Salem* and *Madura*, and to a fall in the amounts of miscellaneous leases. The increase in the Western Circle was due to larger grazing collections.

33. The estimated value of forest produce removed by right-holders was Rs. 53,291 against Rs. 59,978 and of produce granted free Rs. 29,073 against Rs. 24,959.

### (6) *Financial results.*

34. The following statement exhibits the financial results of the year as compared with those of the previous year and with the average of the preceding five years :—

| Years. | Revenue. | Expenditure. | | Total. | Surplus. |
|---|---|---|---|---|---|
| | | A. Conservancy works. | B. Establishments. | | |
| | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1914–1915 .. .. .. .. .. | 40,17,852 | 13,89,296 | 15,47,355 | 29,36,651 | 10,81,201 |
| 1913–1914 .. .. .. .. .. | 40,48,842 | 13,62,460 | 14,78,482 | 28,40,942 | 12,07,900 |
| Average for the * five years preceding 1913–1914. | 40,39,801 | 18,65,190 | 13,50,297 | 32,15,487 | 8,24,314* |

* The corresponding figures given in the last year's report were incorrect—*vide* erratum at the end of the Appendix hereto.

The revenue fell by ·31 lakh while the expenditure under "A. Conservancy and Works" and "B. Establishments" rose by about ·27 and ·69 lakh respectively. The net result was a surplus of 10·81 lakhs which is 1·27 lakhs less than that of the previous year. The Southern Circle stands first, as in the previous years, with a surplus of 6·22 lakhs and the Central Circle next with 4·39 lakhs. The Northern Circle shows a surplus of ·39 lakh against ·45 lakh in the previous year while the Western Circle returns a deficit of ·19 lakh against a surplus of ·46 lakh.

35. In the preceding paragraphs the decreases under the different heads of Revenue have been explained in detail. Generally speaking they may be attributed to the influence of the war.

36. As regards expenditure the increase under "A. Conservancy and Works" (including refunds) was entirely in the Western Circle and was due to an extraordinary charge of Rs. 1,74,849 incurred in the acquisition of the Mudumalai and Kumbarakolli leased forests in the *Nilgiris*. Otherwise all circles show a uniform decrease owing to the change from departmental to contract working. In the Central and Southern Circles, the further reason assigned for the decrease is the short programme of construction of roads and buildings and the curtailment of planting operations and the discontinuance of the hay-making operations in *Cuddapah* and *Guntūr*.

Increased expenditure under B. Establishment was owing mainly to the following causes:—

(1) The debit to the Forest Department of the salaries of the special officers and their establishments appointed for the control of the Chentsus of *Kurnool* and for the formation of Forest panchayats;

(2) the entertainment of a special establishment for selection of blocks in the Rampa country (Gōdāvari district);

(3) the entertainment of a temporary establishment for the Working Plans Officer throughout the year;

(4) the payment in India of leave allowance to a Conservator on leave in England; and

(5) the entertainment of additional temporary executive and protective staffs.

37. The following statement shows the financial results of the year after deducting capital expenditure not yielding an immediate outturn:—

| | Rs. |
|---|---|
| Gross revenue ... ... ... ... ... ... ... | 40,17,852 |
| Value of produce removed by right-holders and free grantees ... ... ... ... ... ... ... ... | 82,364 |
| Total ... | 41,00,216 |
| Gross expenditure ... ... ... ... ... ... | 29,36,651 |

*Deduct* expenditure not yielding an immediate return:—

| | Rs. |
|---|---|
| (1) Communications and buildings ... ... ... ... | 2,92,755 |
| (2) Cultural operations .. ... ... ... ... ... | 72,846 |
| (3) Working plans ... ... ... ... ... ... | 6,187 |
| (4) Settlement... ... ... ... ... ... ... | 1,89,921 |
| (5) Surveys ... ... ... ... ... ... ... | 29,217 |
| (6) Demarcation ... ... ... ... ... ... ... | 33,843 |
| Total ... | 6,24,769 |
| Balance of direct revenue producing expenditure ... ... | 23,11,882 |
| Surplus of revenue over expenditure directly chargeable to revenue ... ... ... ... ... ... ... | 17,88,334 |

38. *Administration.*—Mr. R. C. C. Carr was Head of the Forest Administration up to the 8th January 1915 and was succeeded by Mr. H. F. W. Gillman, who was Forest Commissioner for the rest of the year. Mr. Carr toured in the districts of *Kurnool*, *the Nilgiris*, *Coimbatore*, *Malabar* and *Tinnevelly*. In the *Kurnool* district he conferred with the local officers regarding the control of the Chentsus, and the appointment of a special officer to formulate a regular scheme was the outcome of the conference. His visit to Nilambur (*Malabar*) was specially to consider the erection

of a standing camp for the Forest College. In *Tinnevelly* he discussed with the local officers the classification of Forests and the question of raising the grazing fees of some blocks in the district. Mr. Gillman toured in the *Kurnool*, *Cuddapah*, *Chittoor*, *Vizagapatam* and *North Arcot* districts and visited *Coimbatore*. The inspection notes of the tour in the first four districts have been printed and copies submitted to Government. The tour to *Kurnool* was chiefly in connection with grazing questions and those in *Cuddapah* and *Chittoor* with the protection of the red sanders forests. The tour in the *Vizagapatam* district was confined to the Madgole Agency and the outcome of the tour is the formulation of rules under section 26, since sanctioned by Government, to regulate the clearing of forest land for "podu" cultivation. At *Coimbatore* he was present at the final examination of the Forest College (1913—15) course and presided over a meeting of the Board of Visitors.

39. Messrs. A. W. Lushington and C. D. McCarthy were in charge of the Northern and Western Circles throughout the year. Mr. J. S. Battie held charge of the Southern Circle down to 2nd November 1914, when he retired from service and was succeeded by Mr. P. M. Lushington. The charge of the Central Circle was held by Mr. H. B. Bryant until 25th January 1915, and by Mr. S. Cox for the rest of the year.

The Conservators inspected all the District Forest offices and visited all the districts in their charge except *Trichinopoly*, *South Arcot* (Southern Circle), *South Canara*, *Coimbatore North and Central* (Western Circle), *Anantapur*, *Nellore* and *Cuddapah West* (Central Circle). All District Forest Officers except those of *Vizagapatam*, *Tinnevelly*, *South Malabar*, *the Nilgiris*, *Kollegal* and *Central Coimbatore* spent sufficient time in touring; the short touring of these officers has been satisfactorily explained. All range offices except one each, in *Cuddapah East*, *Cuddapah West*, *Nellore*, *Malabar North*, *Malabar South* and *the Nilgiris* were inspected by the District Forest Officers or their Assistants. The accounts of District Forest offices except those of *Kurnool East and West*, *Guntūr*, *Chingleput*, *South Canara* and *Coimbatore South and Central*, were inspected by auditors from the Accountant-General's office and the results were reported to be generally satisfactory.

40. The year under report was not marked by any event of special importance. Considerable progress was made with the classification of forests on the lines laid down by the Forest Committee and with the formation of panchayats for grazing forests of Class V. The classification of forests has been completed except in *Kurnool*, *Salem* and *South Arcot* Revenue districts for which districts however the areas of forests of classes III (plantations) and V (grazing forests) and VI (useless forests) have been determined. The results obtained so far are that out of a total area of 18,863 square miles of reserved forest in the Presidency at the beginning of the year, 67 square miles have been placed in class III, 1,468 in class V and 248 in class VI. As the scientific investigation of forests of other classes progresses, some further small additions are likely to be made to classes V and VI and it seems clear that at least one-tenth of the total forest area will eventually pass from the control of the Forest Department.

Progress in the formation of panchayats must necessarily be slow as care has to be taken in the initial selections made in each district so that failures which would discourage the people from taking up fresh areas, may be avoided as far as possible. During the year, 84 panchayats were actually working and the area of forest in their charge was 56 square miles. In addition, 30 panchayats have so far been sanctioned which are to commence working in 1915–16. The results of working are reported to have been generally satisfactory.

In February 1915 Mr. E. A. Davis, I.C.S., was placed on special duty for six months to promote the formation of panchayats and the period of his employment has since been extended by another six months. He has done valuable work in the districts of *Bellary*, *Cuddapah*, *Chittoor*, *Chingleput* and *South Arcot*. Another special officer, Mr. H. M. Hood, I.C.S., was appointed for a period of six months to prepare a scheme for the control of the Chentsus in the Kurnool district. This scheme has been received by the Board and will shortly be submitted to Government.

The proposals made by the Board in the previous year for the entire reorganisation of the Forest Department had to be withdrawn as requirements in the matter of the subordinate staff were found to have been under-estimated. Revised proposals will very shortly be submitted to Government.

41. The Board desires to record its high appreciation of the work of all the Conservators and endorses the opinions expressed in their reports on the work of the officers of the Imperial and Provincial service who have been specially commended. Mr. A. W. Lushington who has since retired after 32 years of meritorious service received the title of C.I.E. and Mr. E. C. M. Mascarenhas that of Rai Sahib.

42. *Madras Forest College, Coimbatore.*—Mr. F. L. C. Cowley Brown was Principal of the College throughout the year. Mr. C. B. Dawson filled the post of the Imperial Instructor of the College throughout the year and Mr. H. C. Bennett joined the post of second Imperial Instructor on 4th December 1914 and continued in the College for the rest of the year. The second batch of trained Rangers passed out of the College in June 1915, four receiving Honours Certificates, 24 the Higher Standard and one the Lower Standard Certificate; they were also examined in First Aid by the District Medical and Sanitary Officer of Coimbatore, and 25 were successful in gaming the St. John Ambulance Association Certificate. The Forest Commissioner presided on the occasion when the College prizes and certificates were awarded. During the year under report 32 students joined the College for the 1914–16 course; of these, two were withdrawn from the College for incapacity leaving 30 in residence at the close of the year. This number comprises 20 Government students (5 from each Circle), 4 students from Travancore, 1 from Mysore and 1 from Cochin, and 4 private students. The Hon'ble Mr. Cardew and the late Forest Commissioner visited the students at field work in head-quarters and the present Forest Commissioner inspected the camp and road construction operations at Ootacamund. The new buildings of the College were nearly complete during the year and were opened by His Excellency the Governor of Madras after its close. The Gass Forest Museum has been moved to the College buildings and taken charge of by the Principal. The Board of Visitors met at Coimbatore in June when the final examinations were held and passed a number of resolutions and a draft calendar of the College. The resolutions are now before Government and the calendar which has been modified in parts by Government is in the Press.

The College continued to do good work under the able Principalship of Mr. Cowley Brown who has since been promoted to the post of Conservator and the whole staff worked with zeal and energy.

43. *General-Rules under the Forest Act.*—The working of the timber and sandalwood transit rules was satisfactory. The privileges allowed by the rules under section 26 of the Forest Act were generally availed of by the people and there were no complaints of any importance except from *Ganjām* where a serious abuse in connection with the valuation of tree growth was detected and the Deputy Ranger concerned dismissed and from *Kurnool West* where it is said that in the Yerramalai ranges a tendency exists to denude the unreserves for purpose of trade in timber and fuel.

*Improvement of water-supply in Government grazing grounds (G.O. No. 1622, dated 4th June 1914).*—The Circle-reports show that there is no necessity for improvement of water-supply in the Western Circle except in *Coimbatore* where some steps are said to have been taken and that in the Southern Circle the matter has not been properly attended to so far. In the Central Circle, wells and ponds were constructed, repaired or deepened in all the districts except *Bellary* and *Chingleput*. In the Northern Circle, steps were taken to improve water-supply in *Gōdāvari Lower* and *Kurnool South* but the reports from the other districts of the Circle are silent in the matter.

*Opening of small coupes in the vicinity of villages for rural supply—Paragraph 20 of the orders of Government on the Forest Committee's report.*—It is reported that there was no demand for such coupes in the Western Circle and that in *North Coimbatore* where one or two such coupes were opened or advertised, there were no offers; in the Central Circle coupes are being opened wherever there is a local demand; in the Southern Circle sale of fuel at the edge of the forests is generally carried on by coupe-

contractors in *North Vellore, Trichinopoly* and *Madura*; in the Northern Circle the Conservator reports that in *Kurnool South* small coupes in grazing areas are being marked for sale and that in *Gōdāvari Lower* no demand has arisen: no information has been furnished on the point in regard to the other districts of the Circle.

*Patrol system — Paragraph* 22 (1) *of the Government Order on the Forest Committee's report.*—The patrol system is being introduced in many districts but with the present limited staff, the system cannot be effective as it is impossible to constitute the sections without either leaving a considerable portion of the forests without inspection or making the sections so large that inspection at one end would leave the rest of the section unprotected for too long a period; further there are not at present a sufficient number of intelligent Deputy Rangers to captain the gangs. When the reorganisation of the staff is sanctioned and brought into force, the system can be more widely extended.

*Inducement of villagers to aid in the work of conserving adjoining forest — Paragraph* 22 (2) *of the Government Order on the Forest Committee's report.*—A report has recently been submitted to Government by the Board on the subject of the formation of "Forest villages" and the inducement of ryots of these villages to aid in the conservancy of forests adjoining their villages and entrusted to their care, by a system of rewards and punishments. The orders of Government on the scheme are awaited.

*Forest Conference.*—Three conferences were held by the Forest Commissioner with Conservators during the year, two at Madras and one at Coimbatore, and various forest questions — chief among them being the reorganisation of the department — were discussed. Copies of the proceedings have been submitted to Government.

*Forest Literature.*—Mr. A. W. Lushington's book entitled "Vernacular list of trees, shrubs and woody climbers in the Madras Presidency" was published during the year. It is now in contemplation to prepare "Descriptive lists," on the lines referred to in Resolution XIV (iii) of the Board of Forestry, 1913, in a handy pocket book form, from the information contained in Mr. Lushington's work.

44. A memorandum of minor discrepancies found in the circle reports is appended.

(True Extract.)

G. T. H. Bracken,
*Ag. Secretary.*

To the Secretary to Government, Revenue Department, with appendices.

## APPENDIX.

### Northern Circle.

(i) Appendices C and D are not among the returns prescribed in the Forest Code for submission with the Forest annual report. They should not be printed in future circle reports.

(ii) *Form No.* 65 —The area of reserved lands, viz., 320,636 acres works out to 501 square miles and not 502 square miles as shown in column 13 of the return.

(iii) *Form No.* 67.—The entry in column 2 against Ganjām is not understood. If it represents the previous year's figure as explained in the foot-note it should not find place in that column, for the length of boundaries newly demarcated during the year should alone be entered therein.

(iv) *Form No.* 74.—(*a*) The figures 27,249, 283,534, and 45,760 in columns 7, 13 and 24 respectively against total in the set of figures above unreserved lands are mistakes for 27,239, 55,834; and 45,770.

(*b*) The figure 8,160 in column 11 against total of unreserved lands is a mistake for 8,155.

(*c*) The figures 34,564; 57,661; 320,919; and 45,760 in the columns 7, 11, 13 and 24 against grand total are mistakes for 34,554; 57,656; 93,219 and 45,770 respectively.

(*d*) The figure 17,148 in column 29 against total unreserved lands is a mstake in totalling for 18,148. The figure in the same column against grand total should be altered into 132,355.

(*e*) In the abstract statement at page XVI of the appendices, the figures 64,107; 587,753 and 866,732 are mistakes for 64,097; 360,053; and 639,022.

(v) *Form No.* 77.—The value of grazing and fodder grass removed by purchasers is shown as Rs. 1,20,502 in column 5 of the statement. In form No. 80, the revenue realized in the Circle from the same source is shown as Rs. 1,20,589. The discrepancy has not been explained.

(vi) *Form No.* 82.—The figure in the total column against Kurnool South works out to Rs. 1,07,722 and not Rs. 1,07,772.

(vii) *Form No.* 85.—The figures in the column "in favour of the year" against Gōdāvari Upper and Kurnool South should be 7,127 and 4,375 and not 9,927, and 5,492. The figure in the same column against total is wrong and should be omitted. In the total column "against the year" should be inserted 3,008.

CENTRAL CIRCLE.

(i) *Form No.* 69.—The area for which working plans have been completed, and approved by the Board in the Guntūr district during 1913–14 was shown as 41 square miles in column 2 of the return for that year. In the same column of the statement for 1914–15 it is entered as 8 square miles without any explanation. Similarly the area for which working plans have been sanctioned by the Board for Cuddapah East division during 1913–14 was shown as 109 square miles in column 2 of the return for that year. In column 2 of the statement for 1914–15 it is shown as 103 square miles. The discrepancy has not been explained.

(ii) *Form No.* 71.—Ferest offences compounded by District Forest Officers or the Revenue Divisional Officers should be exhibited under the heading of acquittals in columns 11 and 12 and not in columns 9 and 10 — *vide* paragraph 2 of Goverument Order No. 1101, Revenue, dated 8th May 1915, communicated with Board's Proceedings Forest No. 108, dated 19th July 1915.

SOUTHERN AND WESTERN CIRCLES.

*Form No.* 71.—Forest offences compounded by District Forest Officers or Revenue Divisional Officers should be exhibited under the heading of acquittals in columns 11 and 12 and not in columns 9 and 10 — *vide* paragraph 2 of Government Order No. 1101, Revenue, dated 8th May 1915, communicated with Board's Proceedings Forest No. 108, dated 19th July 1915.

*Erratum to paragraph* 32 *of Board's Proceedings Forest No.* 226, *dated* 26*th November* 1914.

*For* the figures in the column "Average for the five years preceding 1912–13, viz., Rs. 40,39,801; Rs. 18,65,190; Rs. 13,50,297; Rs. 32,15,487, Rs. 8,24,314 *substitute* Rs. 39,87,652; Rs. 19,02,592; Rs. 12,69,150; Rs. 31,71,742; Rs. 8,15,910 respectively.

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**Order—No. 95, Revenue, dated 15th January 1916.**

Forest No. 7.

With the proceedings read above the Board submits, with a covering review, the annual report on forest administration for the year ending 30th June 1915. The volume of the statistical portion of the report has been substantially reduced as a result of the examination referred to as in progress in paragraph 1 of the Government Order on the report for the previous year. There has been a reduction of some fifty pages by the discontinuance of statements found to be unnecessary and the simplification of other appendices the retention of which in a modified form was considered to be essential. The Government will now proceed to notice some of the more salient matters dealt with in the report.

2. *Paragraph* 3 *of the Board's resolution.*—The Board rightly calls attention to the slow rate at which settlement operations have been proceeding in the Upper Gōdāvari district; the Government trust that the instructions issued will remedy this defect.

3. *Paragraph* 4 *of the Board's resolution.*—The separate report called for with regard to the need to carry out the demarcation of the proposed new boundary between the Nilgiris and Central Coimbatore should be submitted to Government with the recommendations of the Board.

4. *Paragraph* 5 *of the Board's resolution.*—The Government have not received, and will be glad now to be supplied with copies of the recently published index map of the Madras Presidency showing the limits of controlling and executive charges; three copies should be furnished.

5. *Paragraphs* 6 *and* 7 *of the Board's resolution.*—The report furnishes evidence of the advantages of employing special officers to prepare working plans and the Government agree with the Board that there is ample scope for the entertainment of one such officer in each circle. Work of this character is of a very responsible nature and the personnel selected for it should be of the highest quality available.

6. *Paragraph* 8 *of the Board's resolution.*—The entertainment of special temporary engineers for the investigation and construction of forest roads marks a new departure of considerable importance. In order to secure the full commercial return possible from the Government forests it is essential to provide adequate communications but in the past for lack of thorough investigation and expert assistance there has been much wasteful expenditure on roads and bridle-paths. The right policy to pursue has been indicated by the Forest Commissioner in his inspection notes on the Kurnool district; attention should be concentrated on roads, in existence or to be constructed, which connect the most important working areas with the neighbouring markets and endeavours should be made to put such roads into thoroughly good working order. Well-considered expenditure in this direction should make valuable coupes accessible and remove the difficulties in transport which Conservators cite in more than one instance as preventing district officers from carrying out the prescriptions of working plans.

7. *Paragraphs* 10 *to* 12 *of the Board's resolution.*—In these paragraphs the Board, while referring to the continuing increase in the number of forest offences reported, anticipates improvement from the disafforestation of useless reserves and the transfer of grazing areas to the management of panchayats, measures which are now in progress, and the Government share the Board's hopes on this subject. Attention is also drawn to the importance of devising methods to secure the co-operation of the people living in or near the reserves in the work of forest conservancy. The circle reports contain numerous references to the value of such co-operation on the part of hill tribes and the Government in passing orders on proposals recently received from the Board with regard to the lines of grazing policy have laid special stress on the advantages likely to be derived from the introduction of a judicious system of rewards for successful co-operation in conservancy coupled with penalties for failure to render that amount of assistance which may reasonably be required from the local residents. The underlying principle should be to graduate the incidence of grazing revenue with reference to the degree of co-operation from the cattle-owners. A further gradual reduction in the number of forest offences may perhaps be expected when the development of communications and the much-needed reorganization of the staff render it feasible to extend the area under intensive working; practical experience in various districts has proved that crime tends to decrease as the forests are brought under systematic working, whether the agencies employed be departmental or consist of contractors.

8. *Paragraphs* 16 *to* 18 *of the Board's resolution.*—The improvement in the degree of success ascribed to measures of fire protection would seem from the circle reports to have been largely attributable to seasonal conditions and perhaps also to the incomplete reporting of fires. The assistance rendered by the Malayalis in the Javadi and Chitteri hills is however matter for special congratulation.

9. *Paragraph* 19 *of the Board's resolution.*—As stated in paragraph 7 above the Government have recently laid down the lines on which grazing shall in future be dealt with. Some enhancement in the scale of grazing fees is inevitable, not only in order to reduce the grazing incidence which is frequently so high as to entail continuous deterioration of the forest growth, but also to provide for the system of rewards and penalties by which it is hoped to enlist the co-operation of the people. The exclusion of goats from reserved forests is essential to efficient reservation and this condition is now within measurable reach.

10. *Paragraph* 20 *of the Board's resolution.*—It is much to be regretted that there has been a further extension of the spike disease which does so much damage to sandal and the Government trust that the special measures in progress in Kollegal, which are mentioned in paragraph 19 of the Western Circle report, will go some way towards indicating efficient methods of prevention. This is the more important in view of the more rapid rate at which sandal is now observed to be spreading by natural reproduction.

11. *Paragraph* 22 *of the Board's resolution.*—In this paragraph the Board brings out the thorough manner in which effect has been given to the policy commended by Mr. Beadon Bryant of restricting expenditure on artificial reproduction.

12. *Paragraphs* 25 *to* 33 *of the Board's resolution.*—As these paragraphs show, another direction in which the policy laid down by Government has been energetically carried out is the extension of the employment of contract agencies for the exploitation of the forests.

13. *Paragraphs* 34 *to* 37 *of the Board's resolution.*—The financial result of the year's working was a surplus of 10·81 lakhs. The decrease of approximately a lakh and a half as compared with the record figure reached in the preceding year is accounted for by a single altogether exceptional item, namely, the expenditure of 1·75 lakhs on the permanent acquisition of a leased forest. But for this item the surplus would have been larger than in any previous year. The figures given in paragraph 37 of the Board's resolution endeavour to show the surplus of revenue over expenditure not properly chargeable to capital heads and similar calculations are to be found in paragraph 41 of the report for the Northern Circle. The Government would be glad if in future reports this aspect of the financial results could be brought out more clearly. It would seem necessary, however, to distinguish more precisely between outlay which a business man would charge against capital and items of expenditure not yielding an immediate return which are nevertheless of a recurring nature; for instance, the first item of deduction in the Board's figures apparently consists of the whole outlay on communications and buildings, though a considerable proportion thereof presumably relates to annual maintenance charges. Subject to these remarks, the Government would welcome an examination of the question what proportion of the annual expenditure may properly be regarded as in the nature of capital outlay justified by an ultimate return of interest at a fair rate.

14. *Paragraph* 40 *of the Board's resolution.*—In this paragraph the Board furnishes particulars of the progress made with the classification of forests and the formation of forest panchayats in accordance with the recommendations of the Forest Committee. The classification work has now nearly been completed and the Board states that at least one-tenth of the present forest area will ultimately pass from the control of the Forest department, mostly into the hands of panchayats. In the formation of these bodies valuable assistance has been rendered by Mr. E. A. Davies, I.C.S., who was placed on special duty for the purpose. The Board reports that the results of the working of the 84 panchayats so far formed have been generally satisfactory and the Government hope that this important new development will achieve a fair measure of success. The circle reports show that in certain cases the management has left very much to be desired but it is too early at present to form any final opinion on the prospects of the movement. The tendency which has been shown by some panchayats in the Coimbatore district to admit numbers of cattle in excess of the grazing possibilities was perhaps to be expected at first but on the other hand it is stated that a feature of panchayat management in the same district is the immediate and substantial enhancement of the scale of grazing fees which suggests that the evil of indiscriminate grazing is recognized by the villagers. The old Government fee of As. 3 per head has been raised in some cases to Re. 1 and even Rs. 1-8 per head.

15. *Reorganization of the Forest department.*—The Government await the revised proposals which the Board is about to submit and trust that financial conditions will improve sufficiently to admit of the early introduction of the reorganization which by common consent is necessary. Apart from the crying need for additions to the superior controlling staff, especially working plans officers, and a larger establishment of trained subordinates, the effective application of the patrol system commended by the Forest Committee is impossible with the present limited protective staff; as observed in paragraph 66 of the Central Circle report, however, such patrols cannot altogether take the place of resident staff, the latter being necessary to supply sufficient local information. In so far as the contemplated reorganization improves the conditions and prospects of service, it should also go some way to raise the standard of conduct, which in the lower grades at present leaves much to be desired.

Much consideration was devoted during the year under report to the elaboration of amendments to the Madras Forest Code designed to place District Forest Officers

in a position of greater independence and responsibility than they have hitherto enjoyed. The Board's final proposals on this important matter have now been fully examined and the orders of Government will shortly issue.

16. The working of the Forest College at Coimbatore continued to be satisfactory.

17. Finally the Government desire to endorse the Board's remarks on the good work of the Conservators, the Principal of the College and other departmental officers and to express their appreciation of the energy and ability with which the department has been controlled by the Forest Commissioner himself.

(True Extract.)

L. DAVIDSON,
*Secretary to Government.*

To the Board of Revenue, Land Revenue (Forests).
" Accountant-General.
" Government of India, Department of Revenue and Agriculture (with C.L.).
" Inspector-General of Forests (with C.L.).
Editors' Table.

# ANNUAL ADMINISTRATION REPORT

OF THE

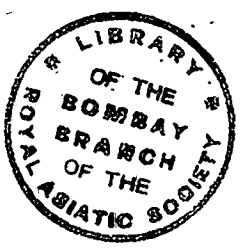
# FOREST DEPARTMENT

OF THE

## MADRAS PRESIDENCY

FOR THE

## TWELVE MONTHS ENDING 30TH JUNE 1916




MADRAS:

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1916.

# ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

FOREST YEAR ENDING 30TH JUNE 1916.

## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in Area.

The following statement shows the abstract of changes in Forest areas:— *Northern Circle.*

| Class. | Area on 1st July 1915. | Added during the year. | Excluded during the year. | Area on 30th June 1916. |
|---|---|---|---|---|
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Reserved forests .. .. .. .. .. | 4,616 | 2 | 13 | 4,605 |
| Do. lands .. .. .. .. .. | 499 | .. | 7 | 492 |
| Leased forests .. .. .. .. .. | 2 | .. | .. | 2 |
| Total .. | 5,117 | 2 | 20 | 5,099 |

One square mile in *Vizagapatam* and one square mile in *Gōdāvari Upper* were finally constituted reserved forests. Ten square miles in *Ganjām* were disafforested and three square miles in *Kistna* were excluded owing to rectification of reserve boundary.

Two square miles by transfer to reserved forests, and one square mile, to rectify an error in the previous year's calculation were deducted from reserved lands. Five square miles in *Ganjām* were eliminated by the adoption of recomputed areas. The other changes were of minor importance.

2. *Reserved forests.*—The chief feature of the year was the disafforestation of 15,343 acres the details for which are noted at foot of Form No. 65. In *Anantapur*, an area of 4,094 acres was transferred from *West Cuddapah* and *Chittoor* districts and 1,164 acres were transferred to *West Cuddapah.* In *Nellore*, owing to resurvey of kancha areas, there was an excess of 5,423 acres and a deficit of 1,401 acres in certain cases. *Central Circle.*

*Reserved lands.*—Two thousand eight hundred and eighty-eight acres consisting of enclosures and extensions were constituted reserved lands. Four thousand nine hundred and eighty-three acres were transferred to reserved forests. Full details have been noted at foot of Form No. 65.

The total area of reserved forests and reserved lands at the close of the year was 5,823 square miles against 5,843 square miles of the previous year.

3. *Reserved forests.*—The total area decreased from 4,353 to 4,347 square miles. One thousand three hundred and eighty-five acres were added by transfer from reserved lands, 3,376 acres transferred to the Public Works Department, 1,203 acres disafforested and 15 acres deducted on account of alteration of reserve boundaries. *Southern Circle.*

*Reserved lands.*—One thousand seven hundred and thirty-four acres were notified reserved lands, 5,104 acres thrown out at Forest Settlement and 621 acres transferred to the Public Works Department.

4. *Reserved forests.*—The alterations are:—Ten square miles were transferred from reserved lands and six square miles disafforested. The net area of the circle at the close of the year was 4,142 square miles. *Western Circle.*

*Reserved lands.*—About three square miles consisting of enclosures in and additions to the existing reserves were added and ten square miles were transferred to reserved forests. The area at the close of the year was 107 square miles, of which 96 are leased forests in the *Nilgiris* and *South Malabar* and five "toda-patta" lands in the former district.

## 2. Forest Settlement.

*Northern Circle.* 5. Thirteen blocks (499 square miles) remained unsettled at the commencement of the year, one block (less than ½ a square mile) was added during the year, and three blocks (2 square miles) were transferred to reserved forests leaving 11 blocks (497 square miles) pending at the end of the year. Of these 11 blocks eight were pending with the Board and three with District Forest officers.

*Central Circle.* 6. One block in *Anantapur* and one in *West Cuddapah* were finally settled during the year. Eight blocks are pending final disposal by Forest Settlement officer and six have been notified under section 4 and are undergoing settlement.

*Southern Circle.* 7. Settlement is complete except in North and South Salem and Trichinopoly. *North Salem.*—Of the four blocks comprised in the Udedurgam reserve, final reports for three have been forwarded to the Board and one is pending with the Forest Settlement Officer for submission of the final report since July 1915. The delay has not been explained.

*South Salem.*—The appeal filed in the Sessions Court by the claimants of the Aranha and Thirthagiri blocks against the decision of the Forest Settlement Officer was first posted for hearing to 29th September 1915 but was then adjourned by the Sessions Judge to 23rd October 1916. The settlement of the Jarugumalai block was transferred from the Revenue Divisional Officer to the Special Assistant Settlement Officer in Board's Proceedings, Forest Mis. No 157, dated 3rd March 1915. The latter only perambulated in November last and passed orders on the claims after a delay of over six months. The appeal expired on 8th June 1916 but the section 16 notification has not yet been submitted. Eleven blocks of about 31 square miles (Veppadi 5 square miles, Vedambiam 5 square miles, 3 bits in the upper Pachamalais 2 square miles, Manmalai 5 square miles, Perumamalai and Kollimalai east and west slopes 2 square miles, and Paithur northern and southern blocks 12 square miles) have since been proposed for reservation and section 4 notifications for 5 of the blocks have been submitted to the Board.

*Trichinopoly.*—Gundur and Ariyur shola blocks were brought under settlement in January 1914 and August 1914 respectively. The final settlement is reported to be pending joint inspection by the Revenue Divisional Officer and the District Forest Officer and the delay is explained as having been due to change of Revenue Divisional Officers.

*Western Circle.* 8. Four blocks in *South Canara*, six in *Kollegal*, three in *Central Coimbatore* and one block in each of the *Nilgiris* and *South Coimbatore* aggregating 10·53 square miles were finally settled during the year; two blocks (·74 sq. mile) in the *Nilgiris* were excluded from reservation. Four blocks (2·91 sq. miles) were brought under settlement. The balance under settlement was nineteen blocks (5·03 sq. miles), but the actual settlement of nine of these was completed. . In the *Nilgiris*, the delay in the settlement of some of the blocks which are enclosures in reserved forests is reported to be due to the difficulty in identifying the actual boundaries of the fields, the survey stones of which were missing and in *North Coimbatore*, the settlement of two blocks was delayed by a Ranger who deferred making the valuation of tree growth on the lands.

## 3. Demarcation.

*Northern Circle.* 9. Four miles of external demarcation was completed in *Ganjām* at a cost of Rs. 88 and 679 miles were repaired at a cost of Rs. 3,851. Four thousand two hundred and sixty-eight miles were recleared by Forest subordinates free of cost. The average cost per mile of demarcation was Rs. 22 and of repairs Rs. 5–10–9 against Rs. 22–14–4 and As. 13–7 respectively in the previous year; the increase under repairs is due to higher rates paid for widening the lines in unhealthy and remote localities such as Chintapalle in *Vizagapatam* and Rampa in *Gōdāvari Lower* and to erection of larger number of new cairns.

10. Fifteen and seven miles were newly demarcated in *Bellary* and *Anantapur* respectively at a cost of Rs. 418. Rupees 6,387 were spent in repairing 4,157 miles of existing boundaries already demarcated. The decrease in expenditure is due to financial stress. *Central Circle.*

One hundred and sixty-four miles of permanent demarcation with solid stone pillars surrounded by well-packed cairns of stones, and with a lockspit or a two-feet wide stone alignment between the cairns, were completed.

11. Final demarcation was carried out in Trichinopoly and Madura over a length of 13 and 57 miles respectively. Rectification of demarcation was carried out in North and South Vellore, South Arcot, North and South Salem and Madura. A great deal of work in this direction has still to be done more especially in the demarcation of enclosures in North Salem and on the Javadis in South Vellore. One hundred and twenty-four miles remained to be demarcated at the close of the year of which 121 miles are in Madura. Rupees 1,271 were spent from Political Funds in demarcating the Travancore boundary to a length of 23 miles in Madura and 31 miles in Tinnevelly. *Southern Circle.*

12. *New boundaries.*—Twelve miles in *North Malabar*, six in *Kollegal* and two in each of the *Nilgiris* and *North Coimbatore* were demarcated at a cost of Rs. 1,351. *Old boundaries.*—Four miles in *Mangalore North* were stone-lined and lockspitted; much more of this work remains to be done in both the *Mangalore* divisions. Progress is delayed by differences between the boundaries notified and those on the ground. Forty-seven miles of boundaries and lines in the teak plantations in *South Malabar* were verified and cleared for survey by the Survey of India. Fifty-four miles in the *Nilgiris* and 32 miles in *North Coimbatore* were demarcated substantially in accordance with the verification by the special staff. The special staff in the former district have verified the boundaries of 49 reserved forests in the Ootacamund taluk, of which 39 have been demarcated. Eight miles of the new boundary between the *Nilgiris* and *Coimbatore* were demarcated and about 5¼ miles roughly aligned. The progress on this work was interrupted by the absence of the officer in charge on leave and his subsequent transfer. *Western Circle.*

The length of lines reported to have been cleared or repaired free of cost by subordinates was 470 miles. In *South Canara*, the *Nilgiris* and *Kollegal* the subordinates continued to maintain the boundaries, but the results were not recorded and in *North Malabar* no such clearing was made.

## 4. Forest Surveys.

### (*a*) *By Survey of India.*

13. No new work was undertaken during the year. It is reported that the Index map for *Kurnool South* has been sent to the Press and those for the remaining two divisions of *Kurnool* would soon follow. Special Divisional map for *Kurnool South* is reported to be in the Press and similar maps for the remaining districts to be in different stages of completion. *Northern Circle.*

### (*b*) *By Departmental Survey.*

During the year Rs. 8,260 were spent on forest surveys. Final maps for reserves have yet to be prepared in *Kistna* for 124 square miles, in *Kurnool East* for three square miles, in *Kurnool South* for 95 square miles and in *Kurnool West* for 230 square miles. The field work during the year consisted chiefly in the verification of boundaries, alignment of roads and fire lines and preparation of coupe, Working Plan and other maps.

### (*a*) *By Survey of India.*

14. During the year the party finally surveyed on 2″ scale one reserve in *East Cuddapah*, two in *Chingleput* and four in *Chittoor* aggregating an area of 1·68, 20·72 and 6·94 square miles respectively. The party commenced work on 4″ scale in *Nellore* district in April 1916 in accordance with G.O. No. 479, Revenue, dated 1st March 1916, and the work is in progress. *Central Circle*

(*b*) *By Departmental Survey.*

In *Bellary*, a special staff consisting of an Extra Assistant Conservator of Forests and two surveyors and four chainmen were employed for surveying the reserves of Adōni range for the purpose of preparing a reconnaissance report and stock maps and the report is under preparation and will shortly be completed.

Survey of coupes, verification or rectification of boundaries, alignment of roads and the preparation of coupe, working plan and fire maps were done by the departmental staff. It is a matter for regret that the orders issued in B.P. Forest No. 150, dated 19th August 1909, that coupes should be surveyed before sale were not always properly attended to by the District Forest officers. Their attention has been drawn to the fact and they have been requested to particularly see that these important instructions are carefully attended to in future.

(*c*) *Maps.*

The reference maps referred to in section 80 of the Forest Code were maintained and posted in all districts.

*Southern Circle.*

(*a*) *By the Survey of India Party.*

15. No surveys were undertaken during the year.

(*b*) *By the Madras Survey Party.*

Revision survey operations were conducted by the Madras Survey party in Madura, and all the Forest discrepancy sketches received during the year have been returned verified.

(*c*) *By Departmental Survey.*

All coupes were surveyed by ordinary staff except in North and South Salem where surveyors were employed and in Madura where similar work was done by a supervisor.

A variety of survey works such as surveying forests for preparation of original and revised working plans, verification of reserve boundaries and the surveying and aligning of roads was done by the existing staff and departmental surveyors.

(*d*) *Maps.*

*Reference maps referred to in section* 80 *of the Forest Code.*—These are reported to have been maintained in all districts.

*Western Circle.*

(*a*) *By the Survey of India Party.*

16. The Survey of India did no work during the year.

(*b*) *Other Surveys.*

All fuel coupes, certain areas under cultivation in reserved forests in *North Malabar* and *Kollegal*, the verification of boundaries in the *Nilgiris*, the trace of a road in *Kollegal* and the alignment of a bridlepath in *South Coimbatore* were surveyed departmentally. A surveyor deputed by the Madras Survey Department rectified the errors in the survey of five of the estates on the Anamalais.

(*c*) *Maps.*

*Reference maps under section* 80 *of the Madras Forest Code.*—These maps were maintained and posted except the Range reference maps in *Kollegal* and *South Coimbatore.*

*Special District Reference maps.*—The Forest Map Officer completed the preparation of the maps of all divisions and his services were terminated on 31st March 1916. Some of the maps are pending publication in the Forest Map Office at Dehra Dun. According to the progress statement furnished by that office, the map of the *Nilgiris* was published and the maps of *North* and *South Malabar* were in the press during the year.

# CHAPTER II.—MANAGEMENT OF STATE FORESTS.

## 1. Regulation of Management.

### (a) *Preparation and Control of Regular Working Plans.*

17. *Preparation.*—On receipt of Board's orders communicating the remarks of the Government of India on the slow progress in the preparation of the Working Plans in this Presidency the attention of the District Forest officers of the Circle was drawn in Direction office C. No. 931 of 1916, dated 11th May 1916, to the necessity of completing the pending plans and of taking up those ear-marked for preparation. They were also requested to report which of the incomplete or contemplated Working Plans may be expected to be finished before 30th June 1917. A précis of their replies as modified by what was subsequently reported in their Annual Administration Reports is given below :— *Northern Circle.*

*Vizagapatam.*—Besides Working Plans that are being drawn up by Mr. Stracey under the direct supervision of the Conservator, fuel Working Plans for Arlova series, a revised Working Plan for Narasapatam fuel working Circle in Sarvasidhi range, fuel Working Plans for (i) Bodlapad, (ii) Buchendri, (iii) Kothapeta, (iv) Bommica, (v) Kothavalasa, (vi) Rassulpeta, (vii) Avalangi, and (viii) Ichapuram and the submission of a Working Plan for the systematic working of bamboos in Palaconda range are expected, the preliminary information therefor having been collected.

*Gōdāvari Upper.*—The preliminary tentative Working Plan for the Marrigudem range will be ready shortly.

*Gōdāvari Lower.*—A revised Working Plan for Coringa reserve has been submitted to the Board, the preliminary Working Plans for Peddapur and Gokavaram ranges returned by the Board have been resubmitted after revision, and the preliminary Working Plans for Polavaram range and certain reserves of Rajahmundry range have been taken up.

*Kistna.*—The revision of the Working Plan for Upputeru blocks (i) and (ii) will be ready shortly.

*Kurnool East.*—A preliminary Working Plan for the Gudem range has been sanctioned during the year; that for Cumbum range has been submitted to the Collector; and the other plans which are to be drawn up on the lines of the above two will be taken up when the former are sanctioned; plans for Markapur and Dornal ranges were also promised by the end of June 1917.

*Kurnool South.*—The Working Plan for the Gundlakamma range and the revision of the plan for Owk range could not be completed for want of an assistant. Sirvel, Chelama and Giddalore range Working Plans will be taken up after the above two are completed.

*Kurnool West.*—The reserves were classified but recently and several Working Plans have to be made or revised; a Working Plan for Alamur tope reserve, was drawn up by the Extra Assistant Conservator and it is under scrutiny; as this reserve has been placed under class (iii) by the Board and is likely to be sold the plan will probably be not required.

In *Ganjām* an interim Working Plan for seven Goomsur ranges has been sanctioned; as this is tentative, the preparation of a Working Plan based on the present administrative and sylvicultural conditions is being taken on hand.

18. *Control.*—The prescriptions of the sanctioned Working Plans have been generally adhered to except in the following cases.

*Ganjām.*—The work of numbering, measuring and listing wind-fallen trees was not undertaken as the order reached the Range officer late; a fuel and a bamboo coupe could not be sold for want of satisfactory bids, another fuel and another bamboo coupe were opened to meet an unexpected demand; estimation for a cart-track and initiation of graded coupe lines could not be completed for want of time on the District Forest officer's part, the diversion and building of a bridge proposed to a road were given up as they were found disadvantageous; the construction of a well was given up as the Local Fund Department contemplated the sinking of one near the forest bungalow; some other works were postponed for want of funds.

*Gōdāvari Upper.*—The preliminary tentative Working Plan for the Bhadrachalam range sanctioned in 1914–15 was not put in force during the year as further proposals are being made for working the forests in Bhadrachalam taluk; a preliminary plan for the Marrigudem range has been prepared and will be submitted shortly.

*Gōdāvari Lower.*—The prescriptions of the Working Plan for Kandikuppa Casuarina plantation were not followed as the area has to be disafforested after the standing growth is disposed of, pending sanction of a revised Working Plan for the Coringa reserve a tentative plan of operations based on the prescriptions to be observed is being followed with Board's approval.

*Kistna.*—The Working Plan sanctioned for the Mangrove forests of Divi taluk for ten years is being continued to compare the results achieved under the ten years' rotation in Upputeru and five years' rotation in Divi. One coupe for timber and another for fuel were not worked for want of demand.

*Kurnool South.*—The Working Plan for Owk palmyra extension sanctioned in 1911 has been cancelled as the area is to be assigned to grazing.

*Kurnool West.*—In the Nallamalai Terai the original system of improvement fellings in timber coupes was reverted to.

*Central Circle.*

19. *Preparation.*—In *East Cuddapah*, the following plans were sanctioned by the Board during the year:—

(1) Red sanders timber forests in Palakondas, Sidhout range in B.P. Forest No. 3, dated 3rd January 1916; (2) Kodur Extension fuel working circle in Chitvel range in B.P. Forest No. 30, dated 21st February 1916; (3) Seshachellam fuel working circle in Kodur range in B.P. Forest No. 67, dated 26th April 1916; and (4) Kalasapad fuel working circle in Porumamilla range in B.P. Forest Mis. No. 628, dated 5th October 1915.

In *West Cuddapah*, the working of fuel and bamboo coupes in Lankamalais, in *Nellore*, working schemes for Ayyavaripalli reserve and Atmakur working circle and revised working plan for Guindy Park in *Chingleput* were tentatively approved by the Conservator.

The following working plans are under preparation:—

In *Bellary*, a simple working plan for the forests of the Harpanahalli range and a reconnaissance report for the Adōni range forests by the Extra Assistant Conservator in accordance with Board's orders.

During the year, sanction has been received in G.O. No. 1389 (Confdl.), dated 17th June 1916, for preparation of working plan for Sandur leased forests. A Working Plan officer has been appointed for the purpose after the close of the year. In *Guntūr*, a preliminary Working Plan for Tadepalli and a revised Working Plan for Guntūr Babul working circle provisions of which ceased to be in force in 1913–14. In *West Cuddapah*, a scheme for Idupulapaya palmyra plantation and a Working Plan for working fuel and bamboo areas in Nallamalais. In *Nellore*, a working scheme for *Anogeissus latifolia* area in Chinna Annalur and for a scheme in the Kanigiri range. In *Chingleput*, revised plans for all working circles are under preparation in accordance with B.P. Forest Mis. No. 785, dated 11th December 1915. In *East Cuddapah*, the Working Plans of Rajampet fuel working circle and Palakonda Bullmen fuel working circle were cancelled as the areas were included in the subsequent working plans sanctioned in B.P. No. 16, dated 16th February 1915, and No. 3, dated 3rd January 1916.

There are several plans requiring revision and the matter is under consideration and correspondence.

20. *Control.*—In *Anantapur*, Anantapur, Upparapalli and Siripi reserves classed as V were thrown open to grazing. In *Guntūr*, the provisions for the Guntūr Babul working circle ceased to be in force in 1913–14. In *West Cuddapah*, three coupes were not worked as the areas were too large to be worked in a year. In *East Cuddapah*, *Chingleput* and *Chittoor* several coupes were not worked for want of demand. The Lankamalai Bullmen fuel working circle of *East Cuddapah* sanctioned in B.P. Forest No. 150, dated 1st August 1908, which was suspended for three years from 1912–13 will have to be abandoned in view of the timber improvement

Working Plan to be prepared for the Lankamalais. As observed in last year's report there is working plan work to be done in the circle sufficient to give employment not only to one but to two or three working plan sections for many years to come, but it is impossible to make any substantial progress under present circumstances on account of serious insufficiency of forest staff.

21. *Preparation.*—The Javadi sandalwood working plan and the supplemental working plan for the Chitteri forests referred to in the previous year's report were sanctioned during the year. *Southern Circle.*

A working plan for the Pālār river side plantations in North Arcot was prepared by the District Forest Officer and submitted for sanction.

The working plan for the fuel areas in *Madura district* was prepared by the Special Working Plans officer and is before the Board. This is a most important plan.

*North Salem.*—The Special Working Plans officer also completed the Hosur sandalwood working plan and submitted it after the close of the year.

*South Salem.*—Revision of the sanctioned working plans for Shevaroys East and Kouramalai working circles was taken up during the year but not completed.

*Trichinopoly.*—A draft working plan for the Cassan forests of Udayarpalaiyam is said to have been prepared by the Range officer, but this work is useless as the forests are likely to be given up.

No reconnaissance report was submitted or this useless work might have been avoided.

*Tinnevelly.*—A great deal of work is required in this district as nearly all the plans require revision and several new plans have to be prepared.

On the whole fair progress was made in this direction but the work that still remains to be done is overwhelming.

22. *Control.*—As long as the working plans themselves are so unsuitable there can be little effective control, but undoubtedly control has improved and the true position of working is gradually coming to light.

*North Vellore.*—Out of 47 current coupes and 312 arrear coupes, only 16 and 13 respectively were leased out. This is a very unsatisfactory state of affairs in a district so favourably situated in respect of markets.

*South Vellore.*—The control over sandal work is at last effective but the regeneration operations were imperfectly carried out.

The fuel operations are still unsatisfactory as 29 current and 156 arrear coupes remained unworked.

*South Arcot.*—This district is at present in a state of flux and in consequence existing working plans are completely upset.

*North Salem.*—In this district all the fuel coupes except those at the foot of the Shevaroys are considerably in arrears. Coupes are too large and much inconvenience has been caused by attempts to mark standards in coupes where very few good standards are available. These mistakes have now been remedied.

*South Salem.*—Out of 31 fuel working circles, work was actually carried out in only 25 owing to the existence of over 100 square miles of unreserved forest in the Attur range which is still worked under the permit system. It is evident that it is useless trying to open fuel coupes in this range.

*Trichinopoly.*—A recent report has shown that for the past 15 and in some cases 20 years there has been no control over the fuel fellings in the important Vaiyampatti range. Coupes have been most irregularly worked, with areas totally different to those prescribed and in the wrong place.

In Nāmakkal and Musiri ranges the working plans have been so badly prepared that they were doomed to failure and no serious attempt has ever been made to carry them out.

*Madura.*—The working of coupes in Palamedu and Kanavoipatti ranges is generally in arrears chiefly for want of means of transport. Nineteen arrear coupes aggregating 835·95 acres were sold during the year.

*Tinnevelly.*—In this district the simple working-plans have always proved a success, but they are now coming to a close and experience shows that the rotation of 20 years is too short. For some years work will have to be carried on in areas outside the present working circles and in Kuttalam especially the District Forest Officer has done good work in showing where such working is possible.

*Western Circle.*

23. *Preparation.*—No new working-plans were either prepared or sanctioned. Mr. C. C. Wilson, the Special Working Plans Officer, with his staff was transferred from the Southern Circle just at the close of the year. He has since been engaged in the preparation of a working plan for the Tekadi leased forests.

*Revision.*—Mr. Bourne with a special staff is engaged in collecting data and statistics for the preparation of the final working plan for the teak plantations in *South Malabar*. The revised working plans for the forests of Mettupalaiyam range and for Tadagam reserved forest in *Central Coimbatore* were pending sanction. The revision of the plan for the forest of Erode range was not taken up pending settlement of the question of handing over some more forests to the management of the forest panchayats.

24. *Control.*—The provisions of the existing working plans were adhered to with the following important exceptions :—*South Canara.*—Kadike, Manaje, Chinkramale and Durgamale fuel and Karadka bamboo coupes were not exploited for want of demand ; so also Sabladi fuel coupe on account of poor growth. The felling in Uppinangadi timber, Narimogar fuel and in some of the Coondapoor range fuel coupes was in arrears partly for want of sufficient labour and partly owing to slack demand, which is attributed to the large quantity of fuel brought to the market from unreserved and kumaki lands and to the effect of the war on tile factories. *North Malabar.*—The work in Begur and Chedleth coupes was behindhand. Coupe XIX of Begur was not completed as the trees in three of the sub-coupes had to be re-marked and felled ; sub-coupes C to E of Chedleth coupe II were not felled for the same reason ; the re-marked trees in sub-coupes A and B were sold, standing late in the year owing to difficulty in procuring a contractor. *South Malabar.*—The prescribed rotation for thinning teak plantations having been completed last year, the plantations laid down for the first year of that rotation were thinned. The *Nilgiris—Plantations.*—Compartment 12 of Acacia working circle prescribed for 1914–15 was felled during the year ; the felling in compartment 15 of the same working circle and the thinning of Frenela and cypress in the Coonoor Eucalyptus working circle were postponed for want of labour. Thinning in Newman plantation was not carried out as the material obtained from the clearing of compartment lines was sufficient for the manufacture of charcoal. *Kollegal.*—The provisions of the working plans for the sandalwood areas in Bailur and Madeswaranmalai reserves were not carried out as the first rotation was over in 1910–11 and the working according to the same prescriptions could not be followed owing to the havoc caused by spike disease. Spiked areas were felled. The working plans for Talamalai range in *North Coimbatore*, for Bolampatti (except Chinnar working circle) in *Central Coimbatore* and for Talinji working circle in *South Coimbatore* remained unworkable. The prescriptions of the working plan for the forests of Erode range were not followed so far as the areas handed over to the panchayat mangement were concerned. *South Coimbatore.*—Felling timber in the Varigali valley was postponed for want of an export road and was stopped in Punachi working circle in the effort to find a contractor for purchasing standing timber which was not successful. The size of coupes in the fuel working circles was not adhered to owing to the impossibility of working the areas prescribed in the plans and the prescriptions regarding weeding, etc., were not carried out.

25. *Preliminary Working Plans Reports—South Canara.*—A working scheme for the extraction of overmature timber from some of the forests in Uppinangadi and Puttur ranges exploitable by the Kumaradhari, Gundia and Yenekal rivers was prepared under the Conservator's instructions by Mr. Hart. These areas are included in the working plans already sanctioned. Three fuel and one bamboo coupes in *Kollegal*, nine fuel, ten bamboo and three sandalwood coupes in *North Coimbatore*, one fuel and three bamboo coupes in *Central Coimbatore* and two fuel coupes in *South Coimbatore* were as usual worked systematically. It is time that formal schemes were prepared.

### (*b*) *Annual Plan of Operations.*

26. The sanctioned plans were generally followed, except as detailed under working plans above and in the following cases :— *Northern Circle.*

*Ganjām.*—Kamala powder and Bassia latifolia seeds were not collected for lack of demand ; a fuel coupe was not worked as the area was intended to be made over for panchayat management ; the construction of a bridle-path was not taken up as it was found unnecessary ; a well in a Range office compound was not sunk for want of funds ; the collection and burning of unsaleable wood on some fire lines were not undertaken as the condition of the lines was sufficiently good.

*Vizagapatàm.*—The construction of a rest-house at Kristnapuram was postponed for want of funds.

*Gōdāvari Lower.*—Some urgent works were given preference to ordinary works sanctioned in the plan.

*Kistna.*—Repairs to five roads, clearing some coupe and boundary lines, rectification of four reserve boundary lines, construction of two dingies (boats) and three subordinates' sheds, surveying and cutting lines in three Mangrove forests, fencing with prickly-pear a small area and sowing babul seed thereon in Bandar Fort extension reserve ; digging inner channels in a coupe had to be given up owing to financial stringency ; certain cultural operations had to be given up for want of proper seeds ; repair of a well was not undertaken as it was full owing to heavy rains and the widening and deepening of a channel which was found unnecessary was given up.

*Kurnool East.*—Certain cart-tracks and buildings were not taken up for want of funds.

*Kurnool South.*—Certain roads and buildings had to be postponed to effect economies during the war.

*Kurnool West.*—The projects for the Pangidi-Sudam-Kuruva road and the road two miles up the Penagonda valley were abandoned.

27. The sanctioned plans of operation were not generally adhered to owing to financial stress and to transfer of reserves to panchayat management. The chief deviations are : In *Bellary*, demarcation and stone wall works had to be postponed. In *Guntūr*, only half the number of coupes proposed were sold for want of demand. In *West Cuddapah*, Block I of Palakonda bamboo working circle was worked instead of block III ; road and building works were postponed for want of funds. In *East Cuddapah*, two road works not provided for in the plan had to be taken up on account of their urgency. In *Nellore*, a building work was not undertaken owing to amalgamation of a range and two well works for want of funds. In *Chingleput*, two branch roads and subordinates' quarters and three wells were postponed for want of funds. In *Chittoor*, demarcation and construction of building works were stopped owing to financial stress. *Central Circle.*

28. Besides the deviations mentioned in paragraph 22 supra, the other important deviations were :—*North Vellore*—Repairs to Yedayampatti-Kanavur road and Chargal-Naickeneri road and bunding of streams in Paravamalai and Erranayakaneri were not carried out for want of funds and timely estimates. *South Vellore*—Construction of rest-houses at Pudur and Reddiyur and repairs to Nadanur rest-house were not taken up owing to the paucity of subordinates and to the difficulty of getting contractors. The sinking of wells at Mandaparai, Pudur and Kuttathur also had to be postponed. *North Salem*—A considerable amount of work outside the working plan had to be done in connexion with "spike" disease. *South Salem*—The construction of five roads and two rest-houses was postponed for want of funds. *Trichinopoly*—The construction of subordinates' quarters at Puliansholai and the rest-house and out-houses and servants' quarters at Nadukombai was postponed for want of funds. *Madura*—The construction of almost all new roads, bridle paths and buildings was postponed for want of funds. The extension of the pine plantations on the Upper Palnis has been stopped. *Southern Circle.*

29. Besides the deviations mentioned in paragraph 24, the only important deviations were :—*South Canara*—The elephant-capturing operations were stopped owing to an outbreak of anthrax. One cart-track and two roads were not constructed as they were unnecessary. Charmadi-Shiradi road, the Ranger's quarters at Coondapoor *Western Circle.*

and the Deputy Rangers' quarters at Kollamuguru and Sitanadi were postponed for want of funds. The demarcation of forests was not undertaken pending verification of boundaries. *North Malabar*—Some of the roads were not widened and a well at Kuppadi was not sunk, on further consideration they appeared to be unnecessary. Deputy Ranger's quarters at Muttanga and guards' quarters at Pavagaddai and Trichileri were not constructed for want of funds. Edathorai reserve was not demarcated as the establishment was engaged on other works. *South Malabar*—A drag road in New Amarampalam reserve, Neelikal bridlepath, two guards' quarters and the demarcation of the Silent Valley reserve were deferred for want of funds. The construction of a standing camp for the Forest College was abandoned. The *Nilgiris*—Two bridlepaths were not constructed as the preparation of estimates was delayed. Sandalwood block near Kunjapanai was not thinned, there being "no demand for the materials to be extracted" (not a very sound reason). *Kollegal*—Elephant-capturing operations were not undertaken, a suitable locality not having been found. Lingamankarai road was not completed pending settlement of the question of acquiring patta lands. Hanur-Cowdalli road was cut out as unnecessary. New range offices at Hanur, Bailur and Ponnachi and subordinates' quarters at Mattipuram were not constructed pending orders about the revision of establishments. Stone walling in Chickailur reserve was not carried out as the demarcation of the same was not completed. *North Coimbatore*—Three small timber and one fuel coupes were not exploited for want of demand. The extension of the Hassanur-Hulikere road, tracing and estimating for two bridlepaths, a well at Kempanayakanpalaiyam and the demarcation of three enclosures in Gutialattur reserve were not taken up for want of establishment and funds. *Central Coimbatore*—Improvement fellings in Tadagam and Mettupalaiyam forests were not carried out as the working plans were not sanctioned. Some of the fuel and bamboo coupes prescribed for the year were not exploited either for want of demand or the felling in previous coupes was in arrears. Two bridlepaths in the Attapadi range were not constructed owing to the incompetency of a Ranger; subordinates' lines at Kalladikode and guard's shed at Tudiki were given up in favour of the incomplete buildings in the Attapadi valley. The site for one building sanctioned in 1914 has not yet been fixed by the District Forest Officer. The inspection shed at Shottaiyur was deferred as the Ranger could not supervise its construction and the Range Clerks' quarters at Iruttupallam for want of funds. *South Coimbatore*—Felling in coupe XXIII of the Tekadi leased forests was stopped owing to the large stock of the timber still awaiting transport from the forests. Timber was not taken beyond Pollachi which is now the rail head and where there is a large depot. The Varigali valley road was not proceeded with pending further investigation. The Mount Stuart ghat road was not commenced as the estimates were not sanctioned. The Tekadi tram line was not begun as investigation was incomplete. The proposal to construct a standing camp for the Forest College was abandoned. Some of the quarters for subordinates were not constructed for want of funds, others were given up in favour of more urgent works and some were found unnecessary. Besides finishing some of the incomplete works of last year, the chief works that were carried out *though not provided for in the plan of operations* were:—*South Malabar*—Construction of a bridlepath in the Silent Valley and of a kitchen to the rest-house at Poochipara. *Central Coimbatore*—The construction of a rest-house at Kunjapanai and clearing of lantana under regular schemes. *South Coimbatore*—Strengthening bridges in the Coimbatore-Pollachi and Pollachi-Sethumadai roads for a road train to pass over and the construction of a bridge over the Aliar river, eradication of lantana and prickly-pear in Punachi and Udumalpet ranges, respectively, the construction of an elephant kraal at Lower Punachi and clearing of a portion of the area in the township on the Anamalais.

### 2. Communications and Buildings.

*Northern Circle.*

30. The total expenditure on new works amounted to Rs. 28,611 and on repairs Rs. 33,038 as compared with Rs. 27,998 and Rs. 38,647 respectively in the previous year.

#### (*a*) *Roads and Bridges.*

The important works of a permanent nature executed during the year were:—*Ganjām*—The Osorobondho-Pondakhol boundary road and the Tarsingi-Kukuluba road were completed. *Kistna*—The Yerrakuruva Hill road was partly completed.

*Kurnool East*—A ghat road from Chintala to Tummalabailu, a ghat bridlepath from Devalude to Telugurayanicheruvu, a rough cart-track from Gudemcherla to Landapaya, a ghat cart-track over Lingamayyakuruva, a bridlepath over Dandakuruva and a birdlepath from Benjamin's view to district boundary. *Kurnool West*—Fifty miles of cart-tracks along existing lines, a cart-track from Munimaduguleru to Pecheruvu six miles long, and a road trace seven miles for the proposed Rudracode-Nallakalva road.

*Central Circle.*

31. The outlay on communications and buildings is compared below :—

| | 1914-15. | 1915-16. |
|---|---|---|
| | Rs. | Rs. |
| Roads and bridges ... ... ... ... ... | 15,670 | 13,181 |
| Buildings ... ... ... ... ... ... | 33,510 | 22,461 |
| Other works ... ... ... ... ... | 2,675 | 866 |

The decrease in expenditure under all heads is due to the postponement of works on account of financial stress.

(*a*) *Roads and Bridges.*

The chief works of the year are —

In *Bellary*, repairs to the bridlepaths in Sandur leased forests. In *Anantapur*, repairs to Bukkapatnam-Siddarampuram and Bukkapatnam-Amagondapaliem roads were completed. In *West Cuddapah*, repairs to Korthimadugu road were completed while a new road from Neelapuram to Dasaripalle was in progress. In *East Cuddapah*, the construction of bridlepaths from Thummalabylu to Kodur range boundary, and Kondur to Harlabylu and from Rollabodu to Jothi and the conversion of Kangamadugu bridlepath into a cart-track were completed whilst the conversion of Vathalur-Thummalabylu track into a road and its extension to Rajampet Railway station as also the construction of a road from Balapalli to Kangamadugu and repairs to Mogalipenta-Balapalli road were in progress. In *Nellore*, progress was made in the construction of a bridlepath along the foot of the Veligondas in Rapur, Udayagiri and Kanigiri ranges and the road from Udayagiri to Bandeganipalli and that from Venkatapuram to Boggutla valley were nearing completion. In *Chingleput*, Allikuli-Ramanjeri road was extended to a distance of 40 chains. In *Chittoor*, the cart-track from Mamandur to Puliutla was completed.

*Tramways.*—In *Nellore*, the laying of tram lines in connection with the transport of fuel was carried out as usual. At Sriharikota, 1,518 tons of fuel were trammed against 609 tons in the previous year. In the coast casuarina plantation of Nellore range 927 tons of fuel were transported. The tram lines and trucks which are the property of Government are lent to fuel contractors on certain conditions for the removal of their stock.

(*a*) *Roads and Bridges.*

*Southern Circle.*

32. The total expenditure on new works amounted to Rs. 5,371 and on repairs to Rs. 14,997 as compared with Rs. 6,233 and Rs. 23,680 in the previous year. This reduction in expenditure was purposely effected. In *South Vellore* 1½ miles of road from Komattiyur to Patrakad and about 2½ miles of inspection path around the Kottur specially protected block were constructed.

A substantial culvert on the Kambugudi Ghat road was also built at its 9th mile. But by far the most important work was done by the Special Forest Engineer who completed 14 miles of alignment for the Alangayam-Komattiyur road and prepared an estimate of Rs. 1,11,400 for construction. The alignment of the Nadanur-Amerdi road was commenced. *South Arcot*—A bridlepath of 4 miles in length from Thuthipatti to Turinjikadu was constructed at a cost of Rs. 293. *North Salem*—The chief work was the repair of 98 miles of road at a cost of Rs. 1,502. *South Salem*—The chief works were 5 miles of road from Panamarathupatti to Malayalapatti and 2½ miles of the Chinnakuppam-Karkanpatti road. Fifty one miles of roads and bridlepaths were repaired at a cost of Rs. 952. *Trichinopoly*—One hundred and eight miles of roads and bridlepaths were repaired at a cost of Rs. 2,739. *Madura*—One hundred and six miles of existing roads were maintained at a cost of Rs. 5,488. In addition to these, 17 Local Fund roads were maintained from funds provided by the District and Taluk boards. In *Tinnevelly* no new works were carried out.

*Western Circle.*

33. The expenditure on new works amounted to Rs. 17,175 and on repairs to Rs. 25,675 as compared with Rs. 25,155 and Rs. 22,148, respectively, in the previous year. *Important new works of the year.—South Canara*—The construction of Kolchar bridlepath. *North Malabar*—The continuation of Brahmagiri-Ampalaparai bridlepath for 5½ miles and construction of bridges on the Kottiyur road. *South Malabar*—The construction of 10½ miles of bridlepaths and 4 miles of cart roads. The *Nilgiris*—The completion of the Mudumalai-Doddakatti bridlepath, the continuation of the Mudumalai-Torapalli road and the commencement of roads in Bleakhouse and Coonoor peak reserved forests. *North Coimbatore*—The completion of four miles of ghat roads at a cost of Rs. 4,479 and *South Coimbatore*—The construction of Attakatti-Aliar road.

*Tramways.*—An extension of 14 furlongs to the tramline in the Tekadi leased forests was completed. The tramming was done mostly by Government bullocks. The working of the year showed a net profit of Rs. 1,441 against Rs. 2,416 in the previous year. The outturn of work during the year decreased from 4,328 to 3,691 ton-miles and the working charges rose from Rs. 1-9-9 to Rs. 1-13-7 per ton-mile; the increased rate was due to the purchase of fresh materials and to the stoppage of tramming work for some time owing to an outbreak of anthrax.

*The work of the Temporary Forest Engineer.*—The Engineer and his staff were under the control of the Public Works Department until the end of March 1916; since then the control was vested in the Forest Department. The work of the Engineer Mr. A. J. Bright was found unsatisfactory and his services were terminated after the close of the year. He revised the estimates for the new Mount Stuart ghat road and the estimates were pending sanction. He was also engaged in investigating a trace for a tramline in the Tekadi leased forests but made no substantial progress.

(*b*) *Buildings.*

*Northern Circle.*

34. *Ganjām.*—The construction of subordinate's sheds at Purnapani, Hattiguda, Kullada and Kesarapalli; huts for Foresters and Forest guards at Jogudi, Deputy Ranger's quarters at Chahali and a wooden rest-house at Osorobondho. *Gōdāvari Lower*—Part construction of rest-house at Veerabhadrapuram, completion of range quarters at Jangareddigudem and combined quarters at Urrinka and two sheds at Jangareddigudem for subordinates. *Kistna*—Re-construction of the stables attached to Kondapalle bungalow. *Kurnool East*—Construction of inspection houses at Garapenta and Burugundala and conversion of the depot buildings at Ganjivaripalli and the village chavadi at Pullalacheruvu into an inspection house and Deputy Ranger's quarters respectively. *Kurnool South*—Completion of the quarters for Deputy Rangers at Isukagundam, construction of a patrol rest-shed at Medimakulapenta, part construction of sheds at Utla and Mamidimanichelama, and the starting of the construction of rest-houses at Aleabad and Isukagundam. *Kurnool West*—The construction of two sheds for patrols at Chakralamadugu and Hatikeswaram and of a compound wall for the Ranger's quarters at Ernipad.

*Central Circle.*

35. In *Bellary*, the repairs to Glenview bungalow were completed. In *Anantapur*, the stable and kitchen attached to the Madakasira Range Officer's quarters, the kitchen attached to the forest bungalow at Kurli and the compound wall round the bungalow at Cherlopalli and repairs to forest bungalow and the range offices at Tadpatri and Kalyandrug were completed while the repairs to forest guard's shed at Guttūr, forest bungalows at Tegarakunta and Rallahalli were in progress. In *Guntūr*, only repair works were done. In *West Cuddapah*, the construction of combined Range office and quarters at Onipenta was in progress. In *East Cuddapah*, Forest Range office at Kodur, subordinates' quarters at Rollabodu, Gollapalli, Bhakarapet and Kodivengammabhavi were completed while the construction of a Range office and quarters at Porumamilla and rest-houses at Mallapalli and Joti and subordinates' quarters at Papanasanam were in progress. In *Nellore*, the construction of Ranger's and range clerk's quarters at Dachur and rest-house with out-houses at Boggutla valley were completed while the construction of a rest-house at Vedullacheruvu and the compound wall around the range buildings at Dachur were in progress. In *Chingleput*, the construction of a rest-house with out-houses at Allikuli was completed. In *Chittoor*, the reconstruction of out-houses at Mamandur and repairs to several bungalows were completed.

36. During the year the total expenditure on new buildings and on repairs amounted to Rs. 23,075 and Rs. 15,005 respectively against Rs. 32,477 and Rs. 11,100 in the previous year. The new works were:—*North Vellore.*—The construction of subordinates' quarters at Kuppam, Chargal and Kannikulam. *South Vellore.*—Construction of a sandalwood chipping shed at Vellore, and the completion of the rest-house at Patrakad. The construction of a range office at Tiruppattur neared completion. A range office at Santhavasal and a rest-house at Kuttathur were begun. *South Arcot.*—Completion of the rest-house and stable at Pavanjipattu. *North Salem.*—Very little progress was made and the ranger's quarters at Kadayampatti are not yet complete. *South Salem.*—Completion of range offices at Attur and Harur. The rest-house at Cauvery peak and subordinates' quarters at Achankuttapatty were also completed. *Trichinopoly.*—Part construction of subordinates' quarters at Puliansholai. *Madura.*—Completion of Vannathiparai and Marian Sholai rest-houses. Subordinates' lines at Guruvanuthu were also completed. *Tinnevelly.*—Completion of subordinates' quarters at Puliangudi, Kodamadi and Pechiammankoil and part construction of quarters at Nambiar. *Southern Circle.*

37. The amount spent under this head was Rs. 44,795 against Rs. 41,466 in the previous year; of the former a sum of Rs. 32,899 was spent on new works and the balance on repairs. Rupees 30,799 and Rs. 10,667 respectively are the previous year's figures. The following were the principal items of new works:—*Rest-houses.*—One each in *North* and *Central Coimbatore* and two in *South Canara* were completed, one in *South Canara* and two in *Central Coimbatore* commenced and two in *North Coimbatore* in progress. The serambi at Teppakadu in the *Nilgiris* was dismantled and set up at Kargudi. The range office at Kanoth in *North Malabar* was commenced. *Range quarters, etc.*—One in *South Canara* was commenced and one each in *North* and *South Malabar* were in progress. The quarters for the Assistant Veterinary Inspector in *South Coimbatore* were completed. Deputy Ranger's quarters at Hoigundi in *Mangalore North* were constructed. *Subordinates' lines.*—One set each in *South Malabar* and *Kollegal* were constructed. Two in *North Coimbatore* and one in *South Coimbatore* were completed. One in the *Nilgiris* was commenced and two in *North Coimbatore* were in progress. *Other buildings.*—One inspection shed in *Mangalore North* was commenced. Construction of kitchen to Poochiparai bungalow in *South Malabar* and of stables and out-houses at Kargudi in the *Nilgiris.* *Western Circle.*

### (*c*) *Miscellaneous Works.*

38. The chief works carried out were the repairs of tanks, sinking of new and repairs of old wells, clearing of springs and digging and widening channels. Bunding of various streams in the Nallamalais of *Kurnool West* was also undertaken. *Northern Circle.*

39. The most important works were the repair or deepening and digging of wells and improvement of water-sources in the grazing blocks. Seven new wells were sunk and 16 old wells repaired at a cost of Rs. 866. Rupees 816 were spent in improvement of water-supply in *Nellore* district. During the year sanction was accorded to the District Forest Officer, *Guntūr*, for the purchase of an Abyssinian tube well for use in the coast forests of the Repalle taluk. *Central Circle.*

40. Five new wells were sunk and 31 old wells repaired or deepened. *Southern Circle.*

41. The total expenditure incurred was Rs. 4,464 against Rs. 8,181 in the previous year. The decrease was due to the stoppage of the river training works in *North Malabar* as the results of the previous expenditure were not satisfactory and to a large expenditure in the previous year in *Kollegal* and *North Coimbatore* on sinking wells and repairs to tanks. The chief works carried out during the year were sinking three wells in *South Canara* of which one was completed, two in *Kollegal* of which one was abandoned and six in *North Coimbatore* of which five were in progress, improvement of the floating channel from Nilambur to Karimpoya bridge in *South Malabar* and fencing the buildings at Kargudi in the *Nilgiris.* *Western Circle.*

*Telephone.*—The telephone service in *South Coimbatore* is reported to be working satisfactorily though there were occasional interruptions, these were not so frequent as in the previous year.

## 3. Protection of Forests.

### (a) *General Protection.*

*Northern Circle.*

42. The following statement shows the number and classification of forest offences brought to light during the year :—

| Class. | Injury to forests by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in forest in which grazing is prohibited. | | Other offences. | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15 | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| Cases taken into court .. | 8 | 10 | 462 | 471 | 194 | 148 | 63 | 52 | 727 | 681 |
| Cases compounded .. | 5 | 10 | 1,812 | 1,977 | 706 | 612 | 132 | 132 | 2,655 | 2,731 |
| Cases undetected .. | 289 | 216 | 183 | 206 | 34 | 21 | 3 | .. | 509 | 443 |
| Total .. | 302 | 236 | 2,457 | 2,654 | 934 | 781 | 198 | 184 | 3,891 | 3,855 |

There has been a slight fall in the total number of offences reported and a general fall under all kinds of offences except under "Unauthorised felling, etc." The increase under this head is attributed to the greater vigilance displayed by the patrols in detection. The District Forest Officer, Vizagapatam, complained against the lenient punishments inflicted by Magistrates, but the Collector remarked that he and his predecessor agreed that no interference was necessary. The Collector of Kurnool considers that more care is required as to the manner in which cases are sent up to court, and that Deputy Rangers and even Rangers often betray a lack of elementary knowledge as to law and procedure and as to what constitutes legal evidence. He suggests that some elementary instruction on these subjects should be given to Rangers and Deputy Rangers. At the Madras Forest College, I believe that considerable attention is paid to this point and that students are taken to watch the hearing of forest cases. The Ranger himself should endeavour to improve the knowledge of those of his Deputy Rangers who have not been trained at the Madras Forest College.

43. There were 554 cases pending at the beginning and 446 at the end of the year. Of these latter, 121 were with Magistrates. Out of the cases brought to trial during the year 722 ended in conviction and 64 in acquittal against 758 and 88 respectively in the previous year, the percentage of failure was 8·14 against 10·40 in the previous year.

*Closure of forests to grazing for not reporting or preventing illicit grazing or other offences on a large scale.*

44. In Vizagapatam the privilege of free grazing of 200 head of cattle of Kondasantha villagers was suspended during the whole year owing to their indifference in rendering help with reference to fires in Sinivaram reserve. In Gōdāvari Lower free grazing was refused from April to the end of September 1916 to the villagers of Sivaramapatnam as they failed to render assistance in putting out a fire in Molleru reserve. In Kurnool West several offending villages were warned of closure to grazing for similar reasons.

45. Two thousand four hundred and sixty-seven cases were compounded for Rs. 25,416 against 2,330 cases for Rs. 24,310 in the previous year.

46. A few rewards were given for assistance in the detection of forest offences and for general protection, apart from the special sums distributed in Upper Gōdāvari and Kurnool out of the Circle Fire Protection allotment.

47. The following statement shows the number and classification of forest offences compared with the previous year :— *Central Circle.*

| Class. | Injury to forests by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in tracts in which grazing is prohibited. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16 | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| Cases taken into Court .. | 2 | 20 | 1,251 | 1,082 | 897 | 1,086 | 121 | 98 | 2,271 | 2,286 |
| Cases compounded .. | 3 | 5 | 4,440 | 3,813 | 3,335 | 2,837 | 209 | 149 | 7,987 | 6,804 |
| Cases undetected .. | 123 | 307 | 266 | 153 | 297 | 423 | 2 | 1 | 688 | 884 |
| Total | 128 | 332 | 5,957 | 5,048 | 4,529 | 4,346 | 332 | 248 | 10,946 | 9,974 |

There was a fall under all heads except injury to forests by fire which was chiefly in *Anantapur* and *Chittoor* due to incendiarism in both districts. The decrease in the total number of forest offences during the year occurs chiefly under "illicit felling" a less number of cases having been reported in all districts excepting *Bellary* and *Anantapur.*

The percentage of acquittal of cases taken to court was 10 against 9·66 in the previous year.

Six thousand six hundred and fifty-seven cases were compounded for Rs. 76,943 while 7,208 cases were compounded for Rs. 76,379 in the previous year.

The number of cases compounded was less than in the previous year but the amount of compounding fees was greater due to levy of deterrent fees in grave cases notably so in *Bellary.*

The punishments awarded by Magistrates are reported to have been generally adequate.

Rewards were granted in all districts except *Bellary*, for successful detection chiefly of illicit grazing and browsing offences and they amounted only to Rs. 527.

48. *The rules for the guidance of Forest Officers in compounding Forest Offences* were observed generally throughout the circle. During the year G.O. Mis. No. 1673, Revenue, dated 17th July 1915, was received prohibiting District Forest Officers' passing orders to confiscate the seized property when compounding an offence.

49. The following statement shows the number of offences of the year compared with the previous year :— *Southern Circle.*

| Class. | Injury to forest by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in tracts in which grazing is prohibited. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. | NO. |
| Cases taken into court .. | 6 | 21 | 1,936 | 3,070 | 778 | 676 | 130 | 105 | 2,850 | 3,872 |
| Cases compounded .. | .. | 4 | 7,919 | 6,912 | 2,597 | 1,702 | 513 | 213 | 11,029 | 8,831 |
| Cases undetected .. .. | 243 | 630 | 236 | 120 | 16 | 43 | 37 | .. | 532 | 793 |
| Total .. | 249 | 655 | 10,091 | 10,102 | 3,391 | 2,421 | 680 | 318 | 14,411 | 13,496 |

Out of 13,496 cases no less than 3,740 referred to unreserves and out of 10,102 cases of unauthorized felling 6,451 relate to reserves and 3,651 to unreserves. There was a marked decrease under grazing cases which is especially noticeable in South Arcot. In this district which holds a bad reputation in respect of forest crime the number of cases in reserves dropped from 1,959 to 1,441 but in unreserves increased from 848 to 1,583. The increase in unreserved cases is attributed to the addition of Tanjore range but the striking drop in reserved forest cases, in spite of this addition has not received proper comment in the district report.

There is a very large decrease of cases in the Trichinopoly district, the total number having dropped from 2,573 to 1,422.

The fall is most marked in the unreserves where the cases are less than half of those of last year.

The increase in the number of cases brought to trial is due in North Vellore to the Magistrate taking cognizance of every forest offence reported to him and issuing process before composition fees are paid, in Madura to some. Magistrates habitually inflicting fines lower than the compounding fees and in North Salem to a great majority of cases ordered to be compounded having been taken to court for non-payment of compounding fees.

*Cases brought to trial.*

| Year. | Convictions. | Acquittals. | Percentage of failure. |
|---|---|---|---|
| 1914–15 .. .. .. .. .. | 2,712 | 158 | 5·50 |
| 1915–16 .. .. .. .. | 3,948 | 210 | 5·05 |

*Cases compounded.*

| Year. | Number of cases. | Amount. |
|---|---|---|
| | | Rs. |
| 1914–15 ... ... ... ... ... ... ... | 9,657 | 84,782 |
| 1915–16 ... ... ... ... ... ... | 7,898 | 56,054 |

In fixing the amount of compensation, attention was generally paid to the orders contained in G.O. No. 1990, dated 13th June 1910.

50. In *South Vellore* a case of theft of sandalwood from the Belur unreserve ended in the sentence of four months' imprisonment. In *South Salem* organized thefts of sandalwood from the Attur Periakalrayans were stated to have been started by a Chetti of South Arcot with the help of the local Malayalis. There were no less than fifteen cases detected which seems to show a regrettable recrudescence of this form of theft.

51. The reward system was sparingly used only Rs. 59 being distributed partly in *South Vellore* and partly in *North Salem.*

*Western Circle.*

52. The offences detected during the year are classified and compared with those of the previous year in the following statement:—

| Class. | Injury to forest by fire. | | Unauthorised felling or appropriation of wood and minor forest produce. | | Grazing without permission or in tract in which grazing is prohibited. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1914–15. | 1915–16. | 1914–15. | 1915–16. | 1914–15. | 1915–16. | 1914–15. | 1915–16. | 1914–15. | 1915–16. |
| Cases taken into court .. | 11 | 41 | 420 | 410 | 152 | 142 | 75 | 86 | 658 | 679 |
| Cases compounded .. | 54 | 25 | 1,693 | 1,699 | 474 | 483 | 233 | 167 | 2,454 | 2,374 |
| Cases undetected .. | 133 | 456 | 31 | 25 | 15 | 18 | 2 | 8 | 181 | 507 |
| Total .. | 198 | 522 | 2,144 | 2,134 | 641 | 643 | 310 | 261 | 3,293 | 3,560 |

NOTE.—The Revenue Divisional Officers in Central Coimbatore have not furnished particulars of the offences dealt with by them.

The total number of offences increased by about 8 per cent. The main increase was under "injury by fire" and was chiefly due to incendiarism mostly in *North* and *Central Coimbatore* and also to some extent to the exceptionally dry season. There was a decrease of 16 per cent under "other offences" which was mostly in the *Mangalore* divisions and has not been explained. The variations under the other heads are small and call for no special remarks.

Of the cases disposed of by the courts, about 90 per cent resulted in convictions which was one per cent less than that in the previous year. The number of cases withdrawn after being taken to court increased from one to fourteen; the increase

was in *Central Coimbatore* and has not been explained. The punishments inflicted by Magistrates are reported to have been inadequate in some instances in *South Canara* and *North Coimbatore*, in the latter division fuel thefts appear to be increasing; in the *Nilgiris* a lenient view was taken in a few cases of incendiarism, the offenders being let off with fines of a few rupees. Elsewhere the punishment inflicted appears as a rule to have suited the crime.

*Compounded offences.*—The number of cases compounded and the amount of fees realized were 2,341 and Rs. 24,400, respectively, against 2,041 and Rs. 23,188 in the previous year. The last year's figures include the offences in unreserved lands in *Central Coimbatore*. There was a decrease in the amount of fees realized in *South Mangalore* and *South Coimbatore* while the number of compounded offences increased; the decrease in the former division is attributed to the smaller fees levied in petty cases and in the latter to there being no cases involving valuable seizures. *The rules for compounding grazing offences* were followed in all districts and worked satisfactorily.

*Undetected offences.*—It is observed that these are almost entirely cases of incendiarism due presumably to the fact that reports are insisted on wherever a fire occurs and the figure given is the total of the fire occurrence reports received after deducting fires caused in fire tracing. In the case of petty thefts noticed on patrol no such reports are made and consequently the number of undetected cases is low. I do not think any useful object would be served by tabulating such illicit removals.

*Holding adjacent villagers responsible for commission of offences in particular forests.*—Notices warning the villagers of their responsibility and of the punitive measures for commission of offences in the adjoining forests were published in *South Canara* and the four divisions of *Coimbatore*. No action was taken in the *Nilgiris* as the system was not workable and in *Malabar* where the number of offences were very few. Consequent on the occurrence of a large number of fires and of illicit fellings in the Bolampatti forests in *Central Coimbatore*, two blocks covering about 36 square miles were closed to grazing for three months. The grazing fees in *North Coimbatore* were doubled for 1916–17 as the result of incendiarism. In *South Coimbatore*, a monigar was suspended for three months for his failure to render assistance to the department.

53. *Rewards—South Canara.*—A Ranger was granted a reward of Rs. 60 for having worked up successfully a case of sandalwood theft. One Land Records Inspector and a village Potail were rewarded Rs. 15 and 5, respectively, for detection of offences. The *Nilgiris*—Rewards amounting to Rs. 8 were granted to forest subordinates for detecting cases of fishing and illicit grazing. *North Coimbatore*—Rs. 135 were granted to 26 persons in 14 cases of illicit felling, grazing and shooting. *Central Coimbatore*—Rewards amounting to Rs. 79 were granted to the forest subordinates for their energy and promptitude in four offences. *South Coimbatore*—Rs. 5 to a guard in connection with a case of illicit removal of timber and Rs. 10 to two coolies for detecting a case of setting fire to forests.

### (*b*) *Protection from Fire.*

54. The areas attempted and protected are given in Form No. 72. The system of having boundary and fire lines cleared by purchasers of material thereon, which was followed with success in Chelama and Sirvel ranges of *Kurnool South*, was extended to Giddalore range of that division; but it proved a failure in *Kurnool West* in the attempt to have the 100 feet wide fire line cut along the Mantralakanama ghat road by contractors owing to inaccessibility of the line. To Mr. Thompson must be given the credit of having introduced the system of selling the right to cut his lines. Some of his lines which would have cost large sums for felling have sold for Rs. 300 per mile. In *Ganjām*, the reserves have been classified under "rigidly protected," "partially protected" and "unprotected areas" with regard to the barriers existing against fires approaching the areas; fire tracing in this division was delayed owing to late rains; clearing of lines was commenced on 15th December 1915 and burning of grass on guide lines was not commenced till the end of January 1916 owing to the greenness of the grass; the burning of frontier lines along the Agency Maliahs in Russellkonda and Mojjagoda ranges was

*Northern Circle.*

not completed till about the middle of March 1916; this was due to some extent to the indifference of the range staff; consequently several fires occurred two of which alone burnt 16,789 acres of partially protected forests. In Pondakhol reserve which is under rigid fire protection there was one fire which crossed from the adjoining zamindari forests burnt 600 acres; another fire in the sal massifs and coupes which were also under rigid protection burnt 234 acres; some of these fires were started by Khonds for shikar and podu purposes; the fires that came from the frontiers could not be checked as the places were not easily accessible; in future for such places Khonds will be appointed as fire patrols and grass and regrowth on all lines removed entirely to enable fire tracing to be completed in January. The general result of fire protection in this division is satisfactory considering the percentage of areas burnt in the "rigidly protected," "partially protected" and "unprotected" areas which are ·98, 10·00 and ·88 respectively. The season was unfavourable. In *Vizagapatam* 3,045 acres in the specially protected area of Dharakonda reserve was burnt partly through slackness of subordinates and partly through the apathy of the villagers of the adjoining mutta: these villagers were warned that a repetition would entail the withdrawal of their privileges. The present District Forest Officer during the year put down the former practice of annually charging a fixed and by no means inconsiderable sum for "clearing" lines that are bare throughout the year. The general result may be considered fairly satisfactory although over 42 per cent of the "generally" protected areas which had no special protective measures of any kind were burnt; whereas in the specially protected areas with fire lines and fire patrols the percentage burnt was 0·26. In *Gōdāvari Upper* the system of lump-sum payment for line clearing combined with proportionate rewards for successful protection was continued, but a larger area was burnt during the year than in the previous year. The District Forest Officer considers that it is partly due to deliberate incendiarism by one or two hostile *patels* in Marrigudem range; the Collector intends paying personal attention to this matter. Fire was excluded from 75 per cent of the area attempted to be protected against 88 per cent in the previous year. The result is fairly satisfactory. In *Gōdāvari Lower* the services of hillmen were as usual utilised and the protection was apparently very satisfactory, being 97 per cent. In Kistna out of 47,642 acres attempted 44,688 acres were protected in spite of the severe hot weather and want of timely rains, and the result may be considered very satisfactory. The season throughout Kurnool was undoubtedly unfavourable. In Kurnool East 54 per cent against 90 per cent in the previous year was protected, the season was very dry and the Collector and the District Forest Officer are of opinion that the Pecheruvu Chenchus have fired the forests out of spite because they were prevented by the police from collecting their customary tolls from pilgrims to Sriselam; these pilgrims also appear to have caused accidental fires. One such pilgrim was detected and the case against him compounded. The fire protection in this division cannot be considered successful. In Kurnool South owing to heavy and late rains fire tracing had to be continued till the end of February 1916; protection was not as good as in the previous year; there were bad fires in Chelama and Gundlakamma ranges owing to want of control over fires on the part of new subordinates, to injudicious counterfiring and in the case of Chelama to an incompetent and lethargic acting Range officer; in the Sirvel range the protection was very good being 43,704 acres against 7,779 acres successfully protected during the previous year, the new lines in this range are getting yearly less covered with regrowth. Twenty-seven per cent of the specially protected areas and 1·85 per cent of areas which had no special protection measures were burnt during the year. The general result cannot be considered satisfactory especially in the important ranges of Chelama and Gundlakamma. In Kurnool West the number of fires was less but the area burnt more than in the previous year; one very big fire which burnt 32,000 acres in the specially protected block of Nandyal range is strongly believed to be the work of some timber thieves of Narayanapuram and other villages; this fire was started simultaneously at several places and no assistance was rendered by the villagers for extinguishing them; Chenchus on the other hand distinguished themselves by working hard to put them out; there were some fires in the neighbourhood of Nagaluti and Pecheruvu gudems where also the stoppage of the collection of metta fees (tolls) from pilgrims to Sriselam is reported to have enraged the Chenchus to incendiarism; as, at present, the promise of reward for protection alone is not sufficient to deter Chenchus from their

customary firing, it is proposed to grant future rewards for regular work throughout the year which will include helping to put out fires and failure to do so will entail forfeiture of rewards otherwise earned by regular work. The percentage of areas burnt in the "specially protected" and "generally protected" areas is 28·96 and 10·20 respectively. Like Kurnool South the result cannot be considered satisfactory.

55. *General.*—A sum of Rs. 57,442 was spent during the year on fire protection. The area dealt with was 4,608 against 4,447 square miles in the previous year. Three thousand nine hundred and twenty-seven square miles were successfully protected against 4,094 square miles in the previous year; the proportion of failure rose to 14·77 from 7·94 in the previous year; the cost per square mile successfully protected fell to Rs. 14–10–0 from Rs. 15–15–1 in the previous year; the fall is due chiefly to cheaper protection in Kurnool South where the new lines are getting yearly less covered with regrowth. I am convinced that fire protection would be far more successful if no lines were burnt after February 15th *at the latest* (all work of this nature if incompleted being stopped then or even before this date if the forests are very inflammable) and if no counterfiring were permitted except in the presence of a trained Ranger. I am of opinion that wherever feasible lines should be cut in November, burnt in December and re-burnt in January.

The ideal is to get bare lines and to attain this object it is worth while spending a considerable sum, which should be debited to capital.

Appendix A shows the number and origin of fires.

*Central Circle.*

56. The area of forest tracts protected is shown in Form No. 72. There was no change in the system of fire protection.

The area under special fire protection during the year was 2,221 square miles against 1,835 of the previous year and the area burnt was 349 square miles compared to 121 square miles.

In *Bellary*, the Sandur leased forest, plantation in Adoni range and the felled coupes were protected, but there were three large fires in Sandur range one of which burnt the whole of Donimalai block. In Bandri reserve 6,311 acres were burnt. In *Anantapur*, the fire protection in Bukkapatnam range was specially bad on account of the Ranger in charge (since dismissed) not taking any interest in his work. In *Guntūr*, there were some small fires said to be due to the introduction of enhanced grazing fees and closure of forests to grazing. In *West Cuddapah*, the decrease in area burnt was due to fire tracing of inter-divisional and exterior fire lines and closer scrutiny of fire protection operations. In *East Cuddapah*, the fall in the area protected is due to increased wilful incendiarism. In *Nellore*, the increased area burnt was due to unfavourable year. In *Chingleput*, for all felled areas, coupe and compartment lines were cleared while special patrols were employed for specially protected areas, viz., Kambakkam and Nagalapuram reserves. In *Chittoor*, the year was unfavourable and there were serious fires in Chamala, Nagapatla-Tirupati extension, Horsleykonda and Naikaneri reserves, and the villagers were warned by the District Forest Officer during his enquiry.

The origin of fires is given in Appendix A.

*Southern Circle.*

57. *Special protection.*—There was no change in the system of protection during the year. The area attempted to be protected was 1,157 square miles against 1,023 square miles in the previous year. The increase is partly in Madura (83 square miles) and partly in Trichinopoly where 103 square miles have been hitherto wrongly classified as general protection. In *South Arcot* and *Trichinopoly* the area burnt is very small which may probably be attributed to the very heavy grazing incidence. In all other districts except *Tinnevelly* the fire season was a bad one. In *South Vellore* the area successfully protected dropped from 99·7 to 86·2 per cent and in *North Salem* the area burnt was nearly 19,000 acres as compared with 5,000 acres in the previous year. The area burnt during the year was 90·40 square miles against 18·31 square miles in the previous year. The percentage of area successfully protected during the year is 91·37 against 98·2 per cent in the previous year. The cost per square mile of successfully protected area fell from Rs. 18–15–4 to Rs. 16–2–2.

58. *General protection* was attempted over 3,144 square miles against 3,137 square miles in the previous year. The percentage of failure rose from 0·4 per cent to 2·4 per cent during the year.

59. The number and origin of fires are given in Appendix A. There were 697 fires burning 117,299 acres against 258 fires burning 20,715 acres in the previous year. There is no doubt that the great majority of the fires were due to incendiarism. Very few cases were actually detected.

*Western Circle.*

60. *Special protection.*—The usual methods of fire protection were followed. The season was generally dry and unfavourable. The area attempted to be protected was 1,127 square miles, i.e., 26·5 per cent of the total forest area, having been decreased by 12 square miles. The decrease was in *Central Coimbatore* (21 square miles) partly counterbalanced by an increase in *Mangalore* divisions (7 square miles) and *South Coimbatore* (2 square miles), chiefly due to transfers from special to general protection and *vice versa*. The area burnt was 120 square miles, giving 89·3 per cent of success compared with 99·2 per cent in 1914-15 and 90·4 in 1913-14. All divisions except *Kollegal* show an increase of failure. 62·4 per cent of the total area burnt was in *North Coimbatore* where there was an epidemic of fires mostly lighted to obtain tender grass. In this division the forests in the Minchiguli valley, Geddesal and other areas containing *Dalbergia latifolia*, *Terminalia tomentosa* and *Pterocarpus Marsupium* are gradually being converted into stunted forests of inferior firehardy species, such as *Anogeissus latifolia* and *Kydia calycina*. About 12 square miles in the Mudumalai forests in the *Nilgiris* were burnt, while the failure in the previous year was 5½ acres. The privileges (free grazing and removal of produce for domestic purposes) allowed to the resident villagers in the forests were suspended for one year for their failure to render assistance in fire protection. In *South Coimbatore* the assistance of hill tribes was enlisted as usual for fire protection. They were granted a reward of Rs. 127 for the successful protection in one of the ranges during the fire season of 1914–15. The cost of protection per square mile of area attempted was Rs. 24–4–11 against Rs. 24–3–6 in the previous year.

61. *General protection.*—The area attempted to be protected was 2,498 square miles against 2,482 in the previous year and the percentage of failure rose from 1·4 to 16·1. Eighty-three per cent of the failure was in *North Coimbatore* for the reason mentioned under "special protection"; as the result of these fires, punitive measures have been taken as mentioned in paragraph 52 supra. It is believed that a point is made of burning the forests every second or third year to get young grass and kill the shrubs and thorny creepers.

62. The number and origin of fires during the year are given in Appendix A. The total number of fires was 563 against 208 in the previous year and the area burnt was considerably more, the average per fire having risen from 141 to 611 acres. *North Coimbatore* division was responsible for more than three quarters of the area burnt; the District Forest Officer knows personally most of the area burned. In some of the other districts the area is undoubtedly understated.

### (c) *Protection from Cattle.*

*Northern Circle.*

63. Out of 5,099 square miles of forests 1,289 square miles were closed to all animals throughout the year and 11 square miles for part of the year against 1,163 square miles for the whole year in 1914–15. Goats were completely excluded from all reserved forests with the exception of a small number admitted under Chenchu settlement rights.

64. Appendix B shows the number of cattle impounded compared with the average of the three years preceding.

*Central Circle.*

65. The area closed and open to grazing is shown in Form No. 73. With the close of the year 1915–16, goats have been prohibited from entering the reserves except in portions of Kayar, Kolathur and Mambakkam, Chingleput district, used as artillery practice ground. The total number of animals grazed amounted to 1,214,480 which is less than last year; the decrease in all districts was chiefly due to enhancement of grazing fees for goats in *Bellary*, to the introduction of a grazing scheme for forests in *Guntūr*, to handing over of certain reserves to panchayat management in most districts and to the closure of pentahs in the Palakondas of *West Cuddapah* district. The decrease in *Nellore* was due to limitation of grazing introduced under kancha system.

To get rid of the nuisance of Srihariкota semi-wild cattle, the Government were pleased in their order No. 935, Revenue, dated 27th April 1916, to approve the proposal for the initial reservation of all the enclosures in the Srihariкota reserve for the extinction of all the rights in the reserve.

66. An analysis of the cattle impounded is given in Appendix B.

67. Eighty-two per cent of the total area of reserved forest was opened to grazing of cattle but closed against goats. The incidence of grazing in the several districts of the circle is given below :— *Southern Circle.*

| District. | Number of cattle in cow units. | Area in acres. | Number of acres per cow unit. |
|---|---|---|---|
| North Vellore .. .. .. | 97,233 | 267,667 | 2·75 |
| South do. .. .. .. | 143,533 | 432,189 | 3·01 |
| Do. Arcot .. .. .. | 111,162 | 192,000 | 1·73 |
| North Salem .. .. .. | 135,917 | 470,446 | 3·46 |
| South do. .. .. .. | 103,951 | 334,720 | 3·22 |
| Trichinopoly .. .. .. | 128,360 | 193,920 | 1·51 |
| Madura .. .. .. .. | 82,600 | 362,880 | 4·39 |
| Tinnevelly .. .. .. .. | 27,680 | 122,880 | 4·44 |
| Total .. | 830,436 | 2,376,702 | 2·86 |

The number of cattle grazed shows a reduction on last year but forests cannot be expected to improve until the incidence is much reduced.

68. An analysis of the cattle impounded during the year with the average of three years is given in Appendix B.

69. The proportion of forests open or closed to grazing was as follows :— *Western Circle.*

| | 1914-15. | 1915-16. |
|---|---|---|
| | PER CENT. | PER CENT. |
| Closed to all animals for the whole year ... ... | 14 | 13 |
| Do. do. for part of the year ... ... | ... | 1 |
| Do. sheep for the whole year ... ... | 10 | 10 |
| Opened to all animals except goats for the whole year... | 76 | 76 |

Goats are not allowed into the reserves. The decrease in the first of the above items was in *North Malabar* (18 square miles) due to a mistake in the figures furnished for the last year, in *North Coimbatore* (12 square miles) to the opening of a portion of the Minchiguli block and in *Central Coimbatore* 36 square miles were thrown open. The number of cattle impounded was 10,054 as compared with 9,338 in the previous year and 9,442, the average of three years. There was a marked increase in *North* and *South Coimbatore* due to better supervision and a decrease in *Central Coimbatore* to a larger number of cattle licensed for grazing.

### (*d*) *Protection against Injuries from Natural Causes.*

70. *Ganjām.*— Defoliating caterpillars attacked sal but the trees resumed their foliage in a fortnight; wild elephants damaged sal regeneration in massifs in Chendragiri reserve, creeper cutting under a more methodical system was introduced. *Vizagapatam.*—Caterpillars attacked a few palmyras in Chinnamangalapuram tope. The palmyras were felled and burnt in Peddakonda coupe ; the bark of a number of standards was pealed off by sambhur. *Gōdāvari Upper*—Correspondence with the Forest Botanist, Dehra Dun, on the subject of identification of the Jacids referred to in last year's report is still in progress: the insect continued to damage teak and *Anageissus latifolia* leaves in Nugur range ; some other insects which have not yet been identified have deen observed to bore through the sap and heartwood of *Xylia dolabriformis*. *Northern Circle.*

71. A gall insect is reported to have attacked the leaves of *Pongamia glabra* and *Prosopis spicigera* in Adoni range of *Bellary* district. In *Guntūr*, owing to hot winds some damage was caused to a few standing trees in casuarina plantations of Bapatla range. In *West* and *East Cuddapah* a caterpillar was observed defoliating *Pterocarpus santalinus* and *Anogeissus latifolia*, but the early rains in July minimised the damage done in *West Cuddapah* and a specimen of the caterpillar was sent to Dehra Dun for *Central Circle.*

identification by District Forest Officer, *East Cuddapah*. In *Chingleput*, creepers and prickly-pear in Guindy Park were removed by subordinates and the lantana in it removed at a cost of Rs. 418. In *Chittoor*, lantana in Horsleykonda was eradicated to a small extent.

*Southern Circle.*

72. *Prickly-pear.*—Practically nothing has been done towards preventing the spread of this pest except in *South Salem* where a preliminary attempt at eradication has been made in five coupes.

Eradication has been ordered in certain places in the *Madura* working-plan.

*Lantana.*—It is regrettable that no further work of eradication is reported from *Tinnevelly* where systematic work was begun last year.

Eradication has been prescribed in some of the sandal areas of *North Salem* in the new working-plan but it is evident that far more sustained attempts to remove this pest should be undertaken throughout this circle.

"*Spike*" *disease.*—Two new infected areas were discovered in *North Salem* and one in Perambalur of *Trichinopoly*. There is no doubt that the disease is spreading gradually and at present no successful method of combating the disease has been discovered. There is no spike in *Tinnevelly*.

The researches of Dr. Coleman of Mysore have however gone some distance in solving this difficult problem. Some new facts concerning the disease were discovered in the course of the Conservator's tour in the Kollimalai Hills of *Trichinopoly*.

Mr. T. N. Hearsey has been employed on special duty in *North Salem* to investigate the disease. He has made some interesting discoveries in connexion with insects which appear to be producing phyllody not only in sandal but in many other species. It is noteworthy that the special bug which is suspected in *North Salem* was also found on a "spiked," sapling in Perambalur, more than 100 miles away. An early solution of the problem is hardly to be expected but the systematic investigation which is now being pursued is bound to improve our knowledge in connexion with the disease.

*Damage by sambhur.*—Sambhur as usual continued to do a good deal of damage in *Tinnevelly*.

*Western Circle.*

73. *Spike disease in sandal.*—*Kollegal* reports that the attempt to stop the spread of spike at Bailur by uprooting every sandal tree and plant and *Zizyphus œnoplia* within 100 yards of the area infected with spike has proved a failure as the disease has crossed the line. The disease continues to spread both in *Kollegal* and *North Coimbatore*, new infection centres having been found near Hosahatti and Kodipuram. There has also been a serious recrudescence near Hassanur. Careful inspection with a lens of leaves and flowers which have recently died on spiked trees in wet weather often shows black sporophores with spores attached; whether these follow or cause spike the writer is unable to say; he thinks the first sign of spike is the death of individual inflorescences as a whole and their not falling normally, the flowers appear to drop one by one often before they are quite dead.

*Lantana.*—A start has been made at eradicating this pest especially in *South Coimbatore*, and *North* and *South Malabar*: *North* and *Central Coimbatore* and the *Nilgiris* have made a beginning. This pest is also prevalent in *Kollegal* and *Mangalore North* and *South* and will have to be attacked there too.

*Prickly-pear.*—The schemes referred to have been drawn up in several districts and a good deal of money has been spent in some cases, details however of the areas dealt with have not been reported.

*Teak defoliators.*—*Hyblæa puera*, *Varnigra* appears to have stripped about half of the Panengode (1886) and Chatamborai (1875) plantations and the whole of the 1874 Chatamborai one. Karimpoya (1902 to 1906) were almost completely stripped between March and June 1916 by *Pyrausta machœralis* which also occurred in the Arevakode, Pokote and other plantations. No information is available as to whether any preventive or curative measures were undertaken.

*Locusts.*—Seven hundred and fifty-eight seers were collected in the Karimpoya teak plantations (1897 to 1900) in *South Malabar* at a cost of Rs. 52.

Beetle attacks following fire are reported to have killed a lot of *Shorea talura* in *North Coimbatore*.

## 4. Sylviculture.

### (a) *Natural Reproduction.*

74. In *Ganjām* it is reported that sal did not flower during the year—an unusal occurrence; it has begun to establish itself on suitable soil in unprotected areas. In *Vizagapatam* reproduction of sal in three reserves of Palaconda range was excellent; it has been observed coming up in patches of even aged advance growth, coppice reproduction in felled coupes was also satisfactory; reproduction of *Xylia dolabriformis* was particularly good wherever occurring, other important species such as *Chloroxylon swietenia* were reported to have been good in parts of Golugonda range. In *Gōdāvari Upper* natural reproduction of the main important species was good. In *Gōdāvari Lower* reproduction from seed was fairly satisfactory in all the ranges; coppice reproduction of *Pterocarpus marsupium* and *Xylia dolabriformis* was satisfactory; reproduction from rootsuckers of *Chloroxylon swietenia*, *Xylia dolabriformis*, etc., was very good. In *Kistna* reproduction from seed was satisfactory in Bezwada and Ellore ranges; coppice reproduction was good in all the ranges; Mangrove (*Avicennia officinalis*) reproduction was excellent in some reserves. In *Kurnool East* natural reproduction in specially protected areas was fairly good; in the bamboo cleared area near Maddipenta a dense crop of *Dalbergia latifolia* is springing up. In *Kurnool South* owing to very good rainfall of the previous two monsoons reproduction of the principal species was more or less good everywhere and as evidence of the protection of the previous eight or ten years seedlings and Fire coppice shoots are prevalent. In *Kurnool West* natural reproduction in the open areas of the Yerramalais was poor owing to excessive grazing; within the stonewalled areas however it was good especially of *Hardwickia binata*. Teak shows astonishing vitality and comes up year after year in spite of being burnt back repeatedly, an excellent example of which is reported to have been seen in Mettupalli reserve in Dhone range where teak-roots 7 or 8 inches in girth are common, while the ærial shoots reach only a height of a few inches. Natural reproduction in the Gundlabrahmeswaram range of the Nallamalais was good owing to successful protection from fire and grazing; it was moderate elsewhere. *Northern Circle.*

I am inclined to think that what have been called teak rootsuckers are really fire-coppice shoots. It has been denied that there is any teak in the Railway Working Circle of the Nallamalais much over 40 years of age. I had a teak of about eleven inches diameter felled. The stool showed 73 rings plus one inch of core (i.e., fire-coppice period). Its age must be at least between 80 and 90 years. In this working circle there is no lack of teak of about the same girth and appearance.

In *Gōdāvari Lower* Division the question of the reproduction of one of the Mangroves by blind sucker-shoots is now under investigation.

75. In this connection there is not much of interest in the circle to report. Coppice reproduction in the felled coupes is reported to have been satisfactory, especially that of *Pterocarpus santalinus* in *Cuddapah* and *Chittoor* districts. *Central Circle.*

Sandalwood is reported to be rapidly spreading in the Palmaner range of *Chittoor* district. It is also found in Chamala and other reserves of the Tirupati range.

In *Guntūr* district the reserves are still subjected to heavy grazing and natural reproduction is therefore not satisfactory.

76. (1) *Sandal.*—The distribution of sandal in this circle is far larger than has hitherto been suspected. It occurs in every district in the circle. Somewhat sparsely in *North Vellore* (Palar and Amerdi plantations), *South Arcot* (outliers of the Kalrayans), *Madura* (Sirumalais) and *Tinnevelly* (Srīvilliputtūr and Kuttalam). In the latter district it is extending round Mundanthorai. It is at its best in the Javadis of *South Vellore*, but there are large workable areas in *North Salem*, *South Salem* (Chitteris, Kalrayans, Pachamalais and Kollimalais with scattered trees in almost every other hill area, and in *Trichinopoly* (Pachamalais and Kollimalais). The natural regeneration of this species is excellent everywhere more especially in the Kottur block (Yelagiris of *South Vellore*) and Melpat (Javadis), the hills of *North Salem*, the Chitteris of *South Salem* and the Pachamalais of *Trichinopoly*. *Southern Circle.*

(2) *Albizzia Amara.*—From nearly every district an excess of coppice shoots of this species is reported. Experiments in thinnings are to be carried out in *Madura* and the results must be carefully watched.

(3) *Chloroxylon Swietenia.*—Seedling growth is very noticeable even in the driest forests of *South Vellore*, whilst in several districts the coppice from this tree is remarkable. In *South Vellore* the growth from coppice exceeds 1½ inches girth per annum.

(4) *Hardwickia Binata.*—In Pavungipattu block of *South Arcot* the seedlings are carpetting the ground and in *North Salem* reproduction of this species is good.

(5) *Pterocarpus Marsupium and Dalbergia Latifolia.*—Seedling reproduction is capital in nearly all the hill divisions.

(6) *Hopea Parviflora and Balanocarpus utilis.*—Seedling reproduction is good in *Tinnevelly*.

(7) *Messua Ferrea and Gluta Travancorica.*—The reproduction of these species is specially good in the evergreen forests of *Tinnevelly*.

(8) *Bambusa Arundinacea.*—These species flowered gregariously in Kuttalam (*Tinnevelly*) and in parts of *North Salem* but there seems to have been no such flowering in other parts of the circle.

*Western Circle.*

77. The bamboo flowering extended to the Mount Stuart forests in *South Coimbatore* and has continued in the *Nilgiris*, *Malabar* and *Kollegal* and in *Mangalore*, *South* and *North*. The question of how to take advantage of the bamboo flowering in *South Coimbatore* with a view to getting in a larger proportion of teak and other valuable timber trees is under consideration by the Working Plans Officer who started work after the close of the year. On the whole natural regeneration has not been as good as usual owing to the intense fires which have occurred in nearly all the districts of the circle. *Hopea parviflora* is reported to have seeded well in *South Malabar* and in *Mangalore*, *South*, but very badly in *Mangalore*, *North* where the conditions are similar.

Natural regeneration of teak does not succeed. Experience shows that the plant must have almost complete light if it is to reach the pole stage.

(*b*) *Artificial Reproduction.*

*Northern Circle.*

78. Form 75 shows the areas under plantations or cultural operations.

*Regular Plantation.*—*Kistna*; the plantations in Malleswaram and Weld reserves were maintained, the former is shortly to be sold. *Kurnool East* in the existing plantations of the Gudem range casualties were replaced from small nurseries maintained near each plantation: these nurseries were looked after by Chenchu women and boys; in the plantations at Maddipenta and Peddachama a very large number of teak plants established themselves permanently; in the plantation at Telugurayanicheruvu teak seems to have a tendency to branch quite early, probably an indication that the soil is unsuitable; in Maddipenta and Peddamantrala plantations grass and some bamboo regrowth which interfered with the growth of the plants were removed. *Kurnool West*—The teak plantations at Nagaluti, Bairluti, Pasurutla, Rudracode, Sudem, Pangidi and Honkaram and the Sandal plantation at Pecheruvu were maintained. The area newly planted at each of the above during the year was reduced to 20 acres as the Chenchus for whose occupation they were started were being tried on other work.

*Cultural operations.*—*Ganjām* 25 Banyan and 50 *Caryota urens* plants were planted fairly successfully in the Napiers park to provide fodder for elephants. *Gōdāvari Lower*—The sowing of Mada (*Avicennia officinalis*) in Coringa reserve was stopped as previous operations had proved a failure. *Kistna*—The Sandal plants in Kondapalli reserve and the 650 Sandal plants around the Kondapalli Palace bungalow are coming up well. Babul (*Acacia arabica*) seeds sown broadcast in the fenced area of Nachugunta Block II germinated well; previous year's sowings are also thriving. *Kurnool East*—Sandal and Red Sanders (*Pterocarpus santalinus*) and seeds of evergreen species were dibbled in selected localities in Markapur and Morricheruvu ranges; bamboos were cut back in the Gudem range to allow of the persistence of better species. A profuse mass of seedlings of *Dalbergia latifolia* resulted in one of such cleared areas; it will be necessary to repeat the clearing more than once—an

expensive operation—to guarantee the future of the young stock. *Kurnool West*—Sandal seeds mixed with teak were dibbled in coupe IV of Gundlabrameswaram range; most of them germinated but 50 per cent died during hot weather.

79. The area under artificial reproduction is exhibited in Form No. 75 and it has been revised with reference to the instructions issued by the Board in B.P. Forest No. 49, dated 1st April 1916. *Central Circle.*

*Regular plantations.*—The existing plantations were continued to be maintained in the circle during the year except the Meyyur plantation which was disafforested during the year and further planting operations have been stopped; but in *West Cuddapah*, 4,000 palmyra seeds were sown in Rameswaram reserved forest.

*Cultural operations.*—In *Anantapur*, the sowing of sandalwood was carried out as an experimental measure in five reserves at a cost of Rs. 147. There was germination in some reserves but most of the seedlings died in the hot weather. In *Guntūr*, cashew nuts and palmyra seeds were sown in some reserves and a fair percentage of seeds is reported to have germinated. In *East Cuddapah*, red sander seeds were sown in 600 pits in the enclosure at Tummalabylu in Seshachellams, but the result was a failure. Sandalwood seeds sown in Mellamkonda reserve are reported to have germinated. In *Nellore*, seeds sown broadcast in closed areas germinated but they could not survive the hot weather. In *Chittoor*, mound sowing of red sanders in Chittoor reserve has not been on the whole satisfactory for want of timely rain. The sandalwood seeds sown in Musalimadugu reserved forest and in Mordana bungalow also have not been successful.

80. *Regular plantations.*—Form 75 has now been correctly prepared as far as possible. The only districts in which there are regular plantations are *North Vellore*, *Madura* and *Tinnevelly*. There were no actual additions except in *Madura*, where seeds were put directly into the ground. This experiment was far from successful. *Southern Circle.*

In Tinnevelly 32,000 palmyra nuts and 8,000 cashew were sown in areas already operated upon in the Teri reserve. Two hundred and sixty-three Banyan and 600 Odina Wodier cuttings were put out along rights-of-way. About 25 per cent of these have begun to shoot.

*Taungyas.*—It has not been reported why the successful Taungya plantations at Kariar were not added to and this want of continuity is to be regretted.

*Cultural operations.*—*South Arcot* shows a large area under cultural operations and a further addition of 529 acres during the year. In reality nothing but a desultory sowing of seeds by subordinates has been done and the operations are of little use.

On the other hand the cultural operations in *Tinnevelly* have been very successful in some places and would have been more so had subsequent weeding been properly attended to. This year's results are said to be poor.

81. *Regular plantations.*—In *South Malabar* a start has been made to extend the teak plantations again and 12 acres were prepared for planting 6′ × 6′. In the *Nilgiris* the experimental plantations of hard-wooded species of *Eucalyptus* at Aramby, Snowdon and Kēti were maintained and the casualties replaced. The area is 132 acres and the cost to date has been Rs. 14,285 which appears a somewhat prohibitive figure for five or six years' work. *Western Circle.*

*Taungyas.*—In *Mangalore*, *South*, no payments were made as the teak plants put out did not reach the height limit of 3 feet. In *North Malabar* 76 acres of land in which bamboo had seeded were cleared in the Begur range with a view to sowing teak seed, two areas aggregating 56 acres are stated to have been partly sown the rest being treated in accordance with the instructions issued by the District Forest Officer. What these were is not stated. The plants in 236 acres in the Kanoth range seem to have failed completely.

*Cultural operations—North Malabar.*—In Chedleth range the group system of planting teak in blanks was continued, 20,000 seedlings being put out at a cost of Rs. 300. In Begur range 6,864 teak seedlings were put out at a cost of Rs. 227, the difference in the cost is due apparently to some lantana clearing; results are not intimated. The experiment in *South Malabar* referred to in the last report of underplanting teak was not carried out in accordance with the proposals approved. *Cassia*

*fistula*, *Dalbergia latifolia*, *Xylia xylocarpa* and *Terminalia tomentosa* were put out on an area of 12 acres at a cost of Rs. 843. *Hopea* seed was obtained in June from *Mangalore*, *South*, and sown broadcast in Pokote, Panengode and in the nursery at the District Forest Office. In *Mangalore*, *South*, a some desultory sowing and planting has been done principally of *Hopea* and *Terminalia tomentosa*. In *North Coimbatore* and *Kollegal* a fairly large quantity of sandal seed was dibbled in. The results of the sowings mentioned last year *s. v. Kollegal* appear to have been a failure. It seems probable that the dibbling of sandal seed in these two districts which are overrun with "spike" is waste of money. *Kollegal* does not refer to the result of the *Acacia arabica* sowing in Dodda Induvadi reserve. Unnecessarily large quantities of seed are indented for by outside districts. I suggest that before indenting, some calculation should be made of the number of seeds to the pound, say for teak, *Pterocarpus Marsupium*, sandal and *Terminalia tomentosa* and that the indenting officer should state the area he wants to plant and that supplies be made accordingly.

(*c*) *Operations for the improvement of growing stock.*

*Northern Circle.* 82. *Creeper cutting.*—In *Kurnool East* near Peddachama and Chintalagudems the Chenchu women and boys were employed in cutting back creepers which interfered with the growth of better species, prickly-pear was removed in Chinaganipalli and Badvid extension reserves to free the palmyra seedlings. In *Kurool West* bunding of streams in the working plan area of Gundlabrahmeswaram and creeper cutting in coupe VI were done; eight miles of stone walling in Yaperlapad and South Dhone reserves were also constructed.

*Central Circle.* 83. *Timber improvement fellings.*—In *West Cuddapah*, 1,167 acres of forests, in *East Cuddapah* 1,665 and in *Chittoor* 479 acres were felled over. *Coppice felling* was as usual carried out in all the districts of the circle for supply of firewood. *Fencing* of all felled coupes is reported to have been done in all districts. *Cutting of creepers and climbers* was carried out in *West and East Cuddapah*, *Nellore and Chittoor*. *Bunding of streams*—Old bunds were repaired in *Bellary* and new ones constructed on a small scale in *Chittoor*. *Stone-walling* was done in *Anantapur*, *West and East Cuddapah and Chittoor*.

*Southern Circle.* 84. The cutting of creepers on standards by the subordinates is carried out in most districts and coupes were fenced.

In the Javadis and Yelagiris of *South Vellore* some really useful work was done in the removal of creeper growth in the sandal areas. 42,207 acres were systematically dealt with in this way.

Similar work was done in the Chitteris of *South Salem* but the area treated has not been reported.

Similar operations are greatly needed in *North Salem* and in the Pachamalais and Kollimalais where the work carried cut has been entrusted to subordinates and in consequence not properly carried out.

Creeper cutting was also carried out in the Ambasamudram range of Tinnevelly to free the better Shola trees but the area operated upon has not been reported. Such work to be of real value ought to be carried out under a regular scheme.

*Western Circle.* 85. In *Mangalore*, *South*, light improvement fellings and creeper cuttings were done over an area of 1,270 acres. In *Mangalore*, *North*, 1,645 acres were so dealt with. The work is an important one and should receive special attention. In *South Malabar* thinnings were begun in five of the teak plantations but were not completed (area not stated). *Loranthus* was removed and burned from an area of 306 acres. Creeper cutting was done in 293 acres; pruning over an area of 80 acres and the weeding of 490 acres of young teak plantation were carried out. In *South Coimbatore*, 295 acres were weeded to free young teak, rosewood and *Pterocarpus*. As usual the cutting or girdling of soft wooded trees in fuel coupes was carried out in *Kollegal* and *North Coimbatore*. In the *Nilgiris*, improvement fellings and creeper cutting was carried out over an area of 160 acres in block I of the Mudumalai working circle and thinning in the Mutinad plantation. Dead, dying and unsound teak were extracted from an area of 992 acres.

(*d*) *Experiments.*

86. Sandal is reported to be doing well in most divisions, especially at Diguvametta in Kurnool South and at Kondapalli in *Kistna*. As regards other species the experiments are at present on such a minute scale as to call for no special notice. *Northern Circle.*

*Test of annual increment.*—In *Gōdāvari Lower* with a view to determine the quantity of annual growth, five sample plots of 1 acre each were taken in the portion worked out in Kovvada fuel coupe of the Polavaram range. They were clear felled and the results recorded.

87. There is nothing of interest to report. *Dalbergia sissoo.*—In the Moka plantation in *Bellary*, the height of the old plantations varies from 20 to 25 feet, in those of 1912–13 from 3 to 6 feet and in those of 1913–14 from 1 to 4 feet. *Eucalyptus globulus.*—The growth in *West Cuddapah* is reported to be not satisfactory, but in *East Cuddapah and Chittoor* they are reported to be growing fairly well. *Acacia auriculiformis.*—These plants in *West Cuddapah* are still surviving but are not doing well. *Swietenia Mahogani.*—In *East Cuddapah*, these plants with the exception of 3 are alive but the rate of growth is very slow. In *Chittoor* they continue to do fairly well. *Central Circle.*

88. (1) *Dalbergia Sissu.*—This species is doing well in *North Vellore* but failed in *South Arcot.* *Southern Circle.*

(2) *Pterocarpus Santalinus.*—This species continues to do well in the Amerdi and Banavaram plantations of *North Vellore* and as the tree is easy to propogate it should be much more widely introduced in this district.

(3) *Experiment to destroy creeper growth.*—This was tried in several districts. In Northern India it was recommended that the cut ends should be treated with a thick lime paste. It is too early to state definite results at present but the lime paste does not appear to stop the growth.

(4) *Sandalwood girdling experiments.*—These experiments were started by the Working Plans Officer in *South Vellore* as it was claimed for girdling

(*a*) that rootshoots would be produced,
(*b*) that the heartwood would be increased,
(*c*) that by the gradual killing of the tree the heartwood would not be liable to cracking.

The experiment is as yet imperfect but it is observed that, though a large number of shoots spring up from below the girdle, true rootshoots are not produced unless the actual root is wounded. There does not appear to be any increase in heartwood by girdling but further observation is necessary. As the trees have not been removed yet no report on the third point is possible.

89. Painting with lime of stumps of creepers cut was tried but no definite results have been arrived at yet. In *Mangalore South*, an attempt on a small scale was made to float timber down the Paishwani river to Kasaragod. Seven hundred and thirty-eight cubic feet were brought down at a cost of Rs. 218 (excluding felling charges), the timber and bamboos realizing Rs. 399. In the *Nilgiris* and *South Coimbatore*, experiments in teak regeneration were carried out; in the former district the growth except teak seed bearers being removed and the ground worked up on one acre, on a second acre the growth was clean felled and teak seed dibbled in, in a third acre the area was clean felled: in the latter district five plots aggregating two acres were clean felled and dibbled with teak seed at stake to three feet intervals and weeded, the cost amounting to Rs. 141: a cheaper method of regeneration is now being looked for. In *North Coimbatore* a plot was laid out in Minchuguli to test the effect of removing grass from areas in which rosewood and *Pterocarpus* seedlings and root suckers were coming up. Another area of 80 acres about two miles south of Girgagandi in *Hardwickia binata* area was put under special fire protection to see the result on regeneration. Mr. Nelson's bamboo pulp scheme in *Malabar* is held in abeyance on account of the war and because of the flowering of the bamboos. *South Coimbatore* reports that the clearing of grass round trees to induce regeneration is a failure, not a single seedling being available for an expenditure of Rs. 569. This is a work prescribed in the working-plan but the cost emphasises the need for learning to walk before attempting to run. Bark of *Acacia dealbata* and leaves of *Frenella rhomboidea* have been supplied to two firms from the *Nilgiris* for experiments in tanning and the extraction of oil. *Western Circle.*

## 5. Exploitation.

### (a) *System of management.*

*Northern Circle.*

90. The total area for which regular working-plans were sanctioned was 2,423 square miles and the area dealt with under different sylvicultural systems are detailed below:—

| Sylvicultural system. | Area in square miles. | Per centage. |
|---|---|---|
| (1) Clear felling... ... ... ... ... ... | 147 | 6·07 |
| (2) Selection felling ... ... ... ... | 52 | 2·14 |
| (3) Simple coppice felling ... ... ... ... | 83 | 3·43 |
| (4) Coppice with standard felling ... ... ... | 315 | 13·00 |
| (5) Improvement felling (mostly selection) ... ... | 469 | 19·35 |
| (6) Unworked areas ... ... ... ... ... | 1,357 | 56·01 |
| Total ... | 2,423 | 100·00 |

#### (i) Major Forest Produce.

##### (1) *Clear or Regeneration Fellings.*

91. Six coupes in *Ganjām*, two compartments in *Gōdāvari*, *Lower*, 2½ compartments and 10 coupes in *Kistna*, the new boundary lines and the fire lines in *Kurnool*, *South*, were felled under this system.

##### (2) *Selection Fellings.*

92. *Ganjām.*—Twenty sal trees of over 7½ feet in girth were extracted departmentally from Rambha reserve under the working-plan. The indent system for the disposal of the valuable timber species from unreserves has been in force for eight years. The demand under this system decreased during the year under report as the rate for sal was raised from 6 to 12 annas per cubic foot. *Vizagapatam*—Wind-fallen and top-broken sal timber from two reserves in Palakonda range was brought down to depots. *Kurnool, East*—Five hundred palmyras from Badvid reserve, dying mis-shapen and rotten trees of other species in Gudem, Dornal, Markapur and Cumbum ranges were selected and felled. *Kurnool, South.*—One hundred and thirty mature palmyra trees were removed from Owk extension reserve. *Kurnool, West*—Selection felling combined with improvement fellings was carried out in the Gundlabrahmeswaram working circle. Dead timber from hill forests was also removed under this system.

##### (3) *Regular Thinnings.*

93. In *Gōdāvari, Lower*, a second thinning of compartment VI of Kandikuppa plantation was carried out during the year.

##### (4) *Improvement Fellings.*

94. In *Ganjām* 1,553 dead sal trees from Gogoda reserve, 1,599 sal trees from Ambazora reserve, 168 sal trees from Chendragiri reserve and 812 dead sal trees from Kriamba C block were sold standing to contractors. In *Gōdāvari, Lower*, besides 38 acres of compartment III of Kandikuppa plantation which were cleared, in eight reserves the right to remove deadwood was leased out to contractors with a view to improving the growing stock. In *Kurnool, East*, only dead trees and tamarind trees which had passed the fruit-bearing age in a coupe were sold to a contractor; Chenchus were employed to fell dead trees to supply fuel to Markapur town and for making spokes and felloes from dead teak and Pterocarpus trees. In *Kurnool, South*, two coupes were worked under this system. In Chelama range the improvement fellings were found to be a form of intensive exploitative operation devoid of ordinary sylvicultural safeguards. This grave error has now been rectified. In *Kurnool, West*, all the timber coupes in the Nallamalais, Terai, one coupe in South Dhone range and one in Gadidamadugu reserve were similarly treated.

(5) *Coppice with standards.*

95. Three fuel coupes in Gundlabrahmeswaram, eleven fuel coupes in *Vizagapatam*, five fuel coupes in *Gōdāvari, Lower*, one coupe in *Kistna*, nine fuel coupes in *Kurnool, South*, and two coupes in *Kurnool, West*, were exploited. During this year the District Forest Officer, *Vizagapatam*, introduced into his division the practice of selling the coupes standing.

(6) *Simple Coppice.*

96. In *Gōdāvari, Lower*, four fuel coupes in Rajahmundry range and three in Polavaram and one in Gokavaram ranges were treated under this system. I am inclined to think that this method is unsuitable for hill sides and probably also for the plains unless the hot weather is very short or the stock is possessed of a high degree of growing energy.

(7) *Unregulated Fellings.*

97. In *Vizagapatam* permits for timber and fuel from unreserves were issued. In *Gōdāvari, Upper*, the right of cutting and removal of timber was not leased out. In *Gōdāvari, Lower*, unregulated fellings were confined to Rampa and to certain unreserves under the control of the Forest Department; the mada fuel from the Hope island was removed on permits issued by the Marine Department; the only unregulated fellings in reserved forests was in the Coringa reserve where the Public Works Department was permitted to remove mada poles and brushwood for river conservancy work. The Hope island which contains valuable forest is at present under the control of the Marine Department in payment of a nominal sum of Rs. 100 per annum. Apart from the loss of revenue over Rs. 9,000 per annum the forest is deteriorating from want of supervision; the Collector considers that its transfer to the Forest Department is advisable. In *Kurnool, West*, permits were granted only for palmyra trees.

98. The total area under working-plans was 1,866 square miles and the various sylvicultural systems in force are shown below :— *Central Circle.*

| Sylvicultural system. | Area in square miles. | Percentage. |
|---|---|---|
| (1) Method of clear felling by compartment ... ... | 7 | ·37 |
| (2) Simple coppice ... ... ... ... ... ... | ... | ... |
| (3) Coppice with standards ... ... ... ... | 729 | 39·06 |
| (4) Method of improvement fellings ... ... ... | 304 | 16·29 |
| (5) Area closed to felling or worked under no definite sylvicultural system... ... ... ... ... | 826 | 44·28 |
| Total ... | 1,866 | 100·00 |

99. The total area of forests under working-plans is 2,816 square miles. The various sylvicultural systems in force over this are shown in the following table :— *Southern Circle.*

| Sylvicultural system. | Area in square miles. | Percentage. |
|---|---|---|
| (1) Clear fellings ... ... ... ... ... | 1 | 0·04 |
| (2) Simple coppice... ... ... ... ... ... | 180 | 6·39 |
| (3) Selection fellings ... ... ... ... ... | 251 | 8·91 |
| (4) Coppice with standards ... ... ... .. | 1,204 | 42·75 |
| (5) Improvement fellings ... ... ... ... | 431 | 15·31 |
| (6) Pastoral method ... ... .. ... ... | 36 | 1·28 |
| (7) Forest for which working-plans have been prepared but not subjected to any definite working ... ... | 713 | 25·32 |
| Total ... | 2,816 | 100·00 |

(1) *Clear or Regeneration Fellings* and (2) *Simple Coppice.*

100. Two coupes of 620 acres of casuarina in *South Arcot* were clear felled as also ten tank-beds in Tinnevelly. Simple coppice is being gradually introduced into *North* and *South Salem* in places where the standards available are so poor as not to demand consideration.

(3) *Selection Fellings.*

101. The area shown under this head relates chiefly to bamboos.

(4) and (5) *Improvement and Coppice Fellings.*

102. *Improvement fellings.*—The great majority of the area shown under this head relates to sandal fellings.

*Coppice with standards.*—The following coupes were felled under coppice with standards. 29 fuel coupes of 2,486 acres in *North Vellore*, 38 fuel coupes aggregating 2,190 acres in *South Vellore*, 51 coupes of 3,784 acres in *South Arcot*, 8 coupes of 1,852 acres in *North Salem*, 26 fuel coupes in *South Salem*, 22 coupes of 1,525 acres in *Trichinopoly*, 42 coupes of 2,765 acres in *Madura* and 14 ghat forest coupes and 5 plain forest coupes in *Tinnevelly*.

(6) *Unregulated Fellings.*

103. In *North* and *South Vellore*, *South Arcot* and *South Salem* unregulated fellings under the permit system were confined to unreserves. In the reserves of Palni range of Madura, selected and marked timber trees were sold for domestic requirements on payment of seigniorage fees.

*Western Circle.*

104. The various sylvicultural systems in force over the areas under sanctioned working-plans are summarised below :—

| Sylvicultural system. | Area in square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| Method of clear fellings by compartments ... ... | 31 | 1·70 |
| Selection method ... ... ... ... ... ... | 313 | 17·16 |
| Simple coppice ... ... ... ... ... ... | 4 | ·22 |
| Coppice with standards ... ... ... ... ... | 312 | 17·10 |
| Method of improvement fellings ... ... ... ... | 134 | 7·35 |
| Forests for which working-plans have been prepared but not subjected to any definite system of working ... | 1,030 | 56·47 |
| Total ... | 1,824 | 100 |

(1) *Clear or Regeneration Fellings.*

105. In *South Malabar*, 27·71 acres in New Amarampalam reserve were clear felled for the formation of teak plantation; the amount realized was Rs. 809.

(2) *Selection Fellings.*

106. *Mangalore divisions.*—Selection fellings were carried out over 40 acres in coupe I of Madibare timber working circle and in Shibaje coupe VIII. Overmature trees in compartment 1 of Jalsur east block were sold standing and the contractor felled 122 trees which yielded 7,847 cubic feet. *North Malabar*—Three hundred and six acres in coupe XIX of Begur and 140 acres in coupe II of Chedleth were felled. The *Nilgiris*—Unsound and dead sandal trees which yielded 375 quarters were extracted from compartment 2 of Sigur range. *Kollegal*—Spiked and dead sandal trees were removed from coupes I to IV and VII of Madeswaranmalai and coupes I and V of Bailur and from certain other areas; the total yield was 79 tons. *North Coimbatore*—Eight thousand four hundred and seventy-nine sandal trees which yielded 154 tons were felled in three coupes covering 12,672 acres. *South Coimbatore*—The balance of coupe VIII of Punachi working circle which was left over last year and parts of coupes IX and X were felled.

(3) *Simple Coppice.*

107. Thirty-four acres of Eucalyptus and Acacia plantations in the *Nilgiris*.

(4) *Coppice with standards.*

108. *Mangalore divisions.*—Nineteen fuel coupes covering about 485 acres in Coondapur and Sankaranarayana ranges, 5 acres in Narimogar coupe II, and portions of two coupes in Kasaragod range were coppiced. Ten acres in Udipi were cut for supplying fuel to 33 sandalwood oil stills. Portions of two coupes covering 198

acres in Kollegal, eleven coupes (882 acres) in *North Coimbatore*, eighteen coupes (1,254 acres) in *Central Coimbatore* and nine coupes of 375 acres in *South Coimbatore* were felled for supply of fuel and also five coupes in *North Coimbatore* for supply of drag poles and agricultural implements.

(5) *Improvement Fellings.*

109. *Mangalore North.*—Coupe VI of Pilarkan (50) acres was worked for *fuel* (*sic*); the yield was 4,320 cubic feet. (It is not explained how this was an improvement felling.) *South Malabar*—Thinnings were carried out in the teak plantations and 34,133 trees and saplings were extracted. Seven thousand and one teak saplings damaged by elephants in the Karimpoya plantations were cut back. The *Nilgiris*—Nine hundred and ninety-two acres in compartment 3 of block I of Mudumalai working circle was worked over; the yield was 37,833 cubic feet of teak and 2,871 cubic feet of other species as well as 710 teak poles. Compartment 1 of Mutinad plantation (7·27 acres) and *Cryptomeria japonica* in compartment 2 of block I of Cairn Hill working circle were thinned; the yield in the former was used for the manufacture of charcoal. *South Coimbatore*—Improvement fellings were made in coupes VII, IX and X of Punachi working circle—area not reported.

(6) *Unregulated Fellings.*

110. *Mangalore divisions.*—Firewood required for working 95 cinnamon oil stills and for boiling catechu was removed from unreserved lands. Timber was also removed from unreserved lands on payment of seigniorage and dead and wind-blown trees were sold in a few instances from reserved forests. *North Malabar*—One hundred and six rosewood trees were felled from Chedleth and Begur coupes for a special supply. *South Malabar*—Twenty-nine irul (*Xylia*) trees were removed from Arimbrakutta reserve on payment of a fixed value. The *Nilgiris*—Small timber and fuel were as usual removed on permits. *North Coimbatore*—Twenty-six thousand one hundred and eleven cubic feet of timber and 22,722 cubic feet of fuel were removed on permits from unreserved lands.

(ii) Minor Forest Produce.

(1) *Bamboos.*

111. Almost throughout the circle the bamboo coupes in reserved forests were sold to contractors. *Northern Circle.*

(2) *Miscellaneous Produce.*

112. Seigniorage was collected on gravel, earth and other minerals; the usufruct of mango, tamarind and other fruit trees was sold in auction; the collection of *cassia* and other barks, honey, wax, myrabolams, hides, horns, etc., was leased out. In *Ganjām* fruit trees were generally left to the free use of Khonds; *Mallotus* powder was collected and sold at a small profit; in *Vizagapatam* seigniorage was collected in Golgonda taluk at the weekly markets from purchasers of produce collected by hillmen; in *Gōdāvari, Lower*, the right to cut *Cassia auriculata* bark in Rajahmundry was not sold for want of proper bids and permits were as usual issued for the removal of minor produce from Rampa and the agencies of Polavaram and Yellavaram; in *Kistna* one quarry was leased out to the Local Fund Department and another to a contractor; in *Kurnool, East* and *West*, tamarind, soapnuts, myrabolams, nux-vomica seeds, wax, horns and honey were collected through Chenchus and sold; in the latter division sold in auction and in the former sold to a merchant who agreed to buy all the minor produce for 12 months at fixed rates; *cassia* bark which used to be collected by contractors in past years has also been reserved in part in the former division providing work for Chenchus, and the quantity so collected was sold departmentally to a contractor.

(3) *Extraction of Fodder.*

113. In *Gōdāvari, Lower*, the right to cut and remove thatch and fodder grass from the Coringa and Kandikuppa reserves and in *Kistna* such right for fodder grass and mangrove leaves were leased out. In *Kurnool, South*, a certain quantity of

fodder grass was removed from part of Owk and Giddalore ranges as the quantity available outside was insufficient owing to the large number of cattle maintained. In *Kurnool, West*, fodder was collected departmentally for Government bullocks.

(4) *Hay-making.*

114. No operations were undertaken except in *Kurnool, South*, where fodder grass was collected for feeding Government bullocks in the hot weather.

(5) *Grazing.*

115. The permit system was in force in all the divisions. The revenue derived was Rs. 1,19,005 against Rs. 1,20,040 in the previous year. The decrease is attributable in *Ganjām* to two reserves being under process of transfer to panchayat management, and to eight reserves having been disafforested and in *Kurnool, West*, partly to the new system of collecting fees for foreign cattle in pentas, under which graziers have to pay for the whole year instead of purchasing quarterly permits. The Collector of Kurnool remarks in this connection :—

"Proposals were submitted to the Board for enhancing grazing fees, including those for 'penta' cattle. The matter, however, is in abeyance, pending the introduction of the scheme for 'forest villages' recently started. The scheme implies (*a*) a re-examination of all the areas open to grazing, (*b*) a fresh computation of the number of cattle to be provided for, (*c*) a re-allotment of grazing area taking into consideration not merely acreage, but the physical characteristics of the ground, (*d*) an enhancement of fees, with privileged rates for cattle of 'forest villages,' the idea being to obtain a 'lever' by which to move their inhabitants to co-operation. All this will take at least a couple of years, and it is worth considering whether the indefinite postponement of the raising of the rates is desirable."

(1) *Miscellaneous Produce.*

*Central Circle.*

116. Minor produce was leased out to contractors as usual in all the districts except in the Srīharikōta range of *Nellore* district where for local reasons the produce was continued to be collected and sold departmentally. The increase in the price of manure leaf to Rs. 1-8-0 per cart load in *Chingleput* had the effect of reducing the demand.

Permits continued to be issued for stone, earth and road materials.

(2) *Extraction of Fodder.*

117. The Military Grass Farm Department continued to hold leases in *Bellary, Anántapur* and *East Cuddapah* at Rs. 2 per ton of made-hay. In *Bellary* Mr. Howes cut and removed 450 tons of hay from the lease of closed compartments and Mr. Sanders, a private contractor, was allowed to remove fodder from certain reserves for Rs. 200.

(3) *Free removal of Grass.*

118. Free removal of grass was continued to be allowed except the leased areas in all the districts except *Chingleput* where it is reported there was no demand. The concession was largely availed of in *Guntūr* as all the closed areas were thrown open for free removal by the public as a result of the enhancement of grazing fees during the year. In *West Cuddapah* the withdrawal of the concession was under consideration as some of the villagers adjoining Lankamalais and Nallamalais failed to help in putting out fires.

(4) *Hay-making.*

119. No departmental operation for manufacture of hay was conducted during the year.

(5) *Grazing.*

120. The revenue realized during the year was Rs. 3,18,777 against Rs. 2,99,154 of last year. The increase was chiefly in *Guntūr* and *Nellore* due to collection of grazing fees at enhanced rates sanctioned during the year in the former district and to the extension of the kancha system in the latter district except in Kanigiri and Srīharikōta ranges. Increase in *Chittoor* is small and needs no remark. The decrease occurred in the other districts which was chiefly due to the reduction in the

number of goats in *Bellary*, in *Anantapur* to closure of some reserves, in *East Cuddapah* to non-issue of penning permits for certain reserves, and in *Chingleput* to closure of portions of reserves for experimental kanchas and closure of felled coupes and assignment of certain reserves for panchayats.

(1) *Miscellaneous Produce.*

121. Minor forest produce was as usual leased out. Permits were issued for manure leaves in *North* and *South Vellore*, *South Arcot* and *Trichinopoly*. In *South Vellore* this practice is to stop next year and it would be well if a similar reform were introduced into other districts. Four tons of Divi Divi pods were collected departmentally in *North Vellore* and sold for Rs. 156. The Divi Divi pods collected in *Trichinopoly* were sold at Rs. 32 per ton The low prices obtained are surprising considering the demand for tans. *Southern Circle.*

(2) *Extraction of Fodder.*

122. Free removal of grass was allowed in *North* and *South Vellore* and *South Arcot*. In *North Salem* the grass in five closed coupes and two specially protected blocks sold for Rs. 196. In *Madura* removal of grass was allowed on permits. In *Tinnevelly* grass was included in the minor forest produce contract.

(3) *Hay-making.*

123. In *North Vellore* the Banavaram, Kylasagiri and Panamadangi reserves and the Palar plantations were leased out to the Military department on payment of royalty of Rs. 2 per ton of hay removed, Rs. 774 were realised during the year against Rs. 303 in the previous year. It is obvious that this contract is capable of expansion.

(4) *Grazing.*

124. The revenue derived from grazing was Rs. 1,69,467 against Rs. 1,92,251 in the previous year — a decrease of Rs. 22,784 or 11·8 per cent. The decrease is general and is to be partly attributed to the season and partly to the change in the grazing system.

In *North Vellore* panchayat fees were not collected, whilst in *Trichinopoly* the Padugais were handed over to the Public Works Department.

With the transfer of grazing reserves to panchayats a decrease in the gross receipts must be expected but less establishment will be required.

(1) *Bamboos.*

125. Three coupes covering 3,043 acres in *Mangalore North*, Nerankimale coupe II (area not reported) in *Mangalore South*, ten coupes of 20,970 acres in *North Coimbatore*, four coupes of 664 acres in *Central Coimbatore* and six blocks (area not reported) in *South Coimbatore* were leased out. Removals on permits were allowed in *Mangalore North*, *Malabar North*, the *Nilgiris*, *Kollegal* and *South Coimbatore* to meet local demands and from the natural forests of *South Malabar* for floating timber purchased by contractors. Bamboos were extracted departmentally in *Mangalore North* and *South Malabar* for rafting and floating timber. *Western Circle.*

(2) *Miscellaneous Produce.*

126. Minor produce of importance was generally leased out on lump sum contracts. The manufacture of catechu in *Mangalore North*, collection of all produce in Mudumalai and Tunacadavu ranges in the *Nilgiris* and *South Coimbatore* respectively and of gallnuts, sambhur and deer horns, honey, etc., from reserved forests in *Kollegal* were carried out departmentally.

(3) *Extraction of Fodder Grass.*

127. Fodder grass was removed on permits in the four divisions of *Coimbatore*, on the plateau in the *Nilgiris* and in Beypore tope in *South Malabar*. The concession of free removal of grass from reserved forests was not required in *Malabar* as the demand was met from elsewhere and was not permitted in *Coimbatores* as there was no necessity. Free removal of thatching grass was allowed in *Mangalore* divisions and in certain parts of the *Nilgiris*.

(4) *Hay-making.*

128. There were no operations during the year.

(5) *Grazing.*

129. Grazing was as usual regulated by issue of permits except in *South Malabar* where the forests were closed to grazing and in the areas handed over to the management of forest panchayats. Goat browzing was entirely prohibited. The incidence of grazing was generally heavy. A matter of considerable importance was the issue of orders in G.O. No. 298, Revenue, dated 10th February 1916, to introduce a system of preferential grazing for villages which have contributed land for the formation of forest reserves. Such villagers will have in the first instance to pay the same grazing fee as other people but in return for assistance in the prevention of forest offences and fires a substantial rebate will be given at the end of the year. It is feared that the census of "necessary" cattle which is entailed will cause delay in the introduction of the scheme. The number of cattle licensed to grazing on payment was 362,917 against 399,437 in the previous year.

(*b*) *Agency of Exploitation.*

(i) Departmental Agency.

*Northern Circle.*

130. Forms 76 and 77 show separately the different classes of produce collected, and Form 78 the stock disposed of and the balance remaining. The total quantity of timber and fuel and the value of bamboos and minor produce extracted departmentally were 13·73, 3·09 and 2·70 of their respective total outturn through all agencies. The total value of the disposals was Rs. 82,271 against Rs. 1,13,275 in the previous year. The fall is attributed to leaving the removals to a greater extent to contractors. The quantity of timber, fuel and the number of bamboos extracted was 271,447 cubic feet, 648,750 cubic feet and 259,837 against 250,028 cubic feet, 868,935 cubic feet, and 351,783, respectively, in the previous year. The increase in timber occurred chiefly in *Ganjām* owing to the large quantity resulting from cutting coupe lines and the 60 feet wide boundary lines in Pondakhol range. In *Gōdāvari Lower*, to the large quantity of drift wood collected. The decrease under fuel and bamboos is due to extension of the contract system. Minor produce collected was 38,199 maunds against 32,103 maunds in the previous year; the increase is due to the better harvest.

*Central Circle.*

131. The increase in *timber* is due to large extraction for departmental buildings chiefly in *East Cuddapah*. The decrease under *fuel* and *bamboos* is chiefly due to replacing the departmental agency by the contract system and to less quantity exploited for departmental purposes. Under *minor produce* the fall is due to less quantity of nux-vomica extracted in *Nellore*.

*Southern Circle.*

132. The work done by departmental agency is chiefly confined to the extraction of sandalwood and represents only 1·7 per cent of the total outturn.

*Western Circle.*

133. *Major produce—Mangalore North.*—Felling a portion of Madibare timber coupe and improvement fellings. *Mangalore South.*—Felling two hundred trees in Shibaje coupe VIII and felling fuel in a portion of Muliar coupe. *North Malabar.*—Felling of 116,765 cubic feet of timber in three sub-coupes (306 acres) of Begur coupe XIX and in one sub-coupe (140 acres) of Chedleth coupe II. *South Malabar.*—Thinnings in teak plantations and rafting and floating logs and saplings to depot. Top ends of teak saplings were collected on a small scale for supply of fuel. *The Nilgiris.*—Timber in Mudumalai, sandalwood in Sigur and fuel in Ootacamund and Coonoor ranges were felled and fuel was also carted. *Kollegal* and *North Coimbatore.*—Small timber and agricultural implements were felled and sandalwood extracted; also felling fuel in the former division. In *Central Coimbatore* the contractors faults in some fuel coupes were rectified. *South Coimbatore*—Selection and improvement fellings in coupes VII to X of Punachi working circle and the transport of timber from the Tekadi leased forests to depots.

*Minor produce.*— The details are mentioned in paragraphs 126 and 127 supra.

134. *Disposal of produce at the edge of the forests.*—Fuel was sold in some of the coupes in *Mangalore North*. Twenty-five chowks of fuel obtained from the improvement fellings in Pilarkan coupe VI were sold at the edge of the forests. The attempt

to sell small logs and fuel at the edge of Muliar coupe I in *Mangalore South* failed owing to the inattention of the Ranger in charge in stacking them properly. In *South Malabar*, the thinnings in Edacode plantations were sold at river-side depots on the boundaries of the plantations. In *North Coimbatore*, small timber and agricultural implements were retailed in the forest depots. The timber felled in Punachi coupes VII and VIII in *South Coimbatore* and fuel in *Kollegal* were sold in the forests.

(ii) PURCHASERS.

135. There has been decrease in the removal of timber and fuel and increase in that of bamboos and minor produce. The decrease under timber is due to want of demand from the Public Works Department and to a smaller sale of sal in Ganjām owing to increase in the sale rate sanctioned. The decrease under fuel is due to the large number of fuel plantations sold in the previous year. The increase under bamboos is due to more extensive removals by contractors and that under minor produce to the more favourable season. *Northern Circle.*

136. (*a*) *Timber.*—The decrease is due to less number of darkhast applications and less demand for palmyras owing to enhanced seigniorage fees in *Nellore*. *Central Circle.*

(*b*) *Fuel.*—The decrease is reported to be due to less quantity removed from unreserved lands during the year.

(*c*) *Bamboos.*—The increase is due to better growth of bamboos in *West Cuddapah* and to extension of contract system in *Chittoor*.

*Minor produce including grazing.*—The rise is due to large collection of tangedu kists in *Bellary*, *Anantapur* and *East Cuddapah* and to extension of kancha system and to rise in the demand for mica in *Nellore*.

137. *Timber.*—122,528 cubic feet due to fall in the collection of tree value from lands assigned on darkhast in all districts except *North Salem* and *Madura*. *Southern Circle.*

*Fuel.*—538,439 cubic feet. The decrease was due to a less number of coupes having been sold in *North* and *South Vellore* and *North* and *South Salem*. The transfer of padugais to the Public Works Department in Trichinopoly also contributed to the decrease.

*Bamboos*+Rs. 8,903. The increase is due to a matter of adjustment of lease amounts and not to any real increase in the outturn of bamboos.

*Grazing and Minor Produce.*—Rs. 5,336. The districts concerned chiefly with this decrease are *South Vellore* and *South Arcot*. In the former the avaram sales were not good which is surprising when tans are in such demand. The failure of the sales of mordants in *South Arcot* is only natural.

138. One timber and twenty-five fuel coupes in *Mangalore* divisions, 424 acres in Chedleth timber coupe II in *North Malabar*, and 1,958 cubic feet of timber in reserved forests in the *Nilgiris* and all the fuel coupes in *North*, *Central* and *South Coimbatore* were sold standing. Also the unregulated fellings, the extraction of bamboo and the collection of minor produce mentioned in paragraphs 125, 126 and 127 supra. *Western Circle.*

(iii) and (iv) RIGHT AND PRIVILEGE-HOLDERS AND FREE GRANTEES.

139. The following statement shows the estimated quantity and value of produce removed under the above heads:— *Northern Circle.*

| — | Timber. | | Fuel. | | Bamboos. | Minor produce. | Grazing. | Total. | Value in the previous year. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Value. | Value. | Value. | Value. | |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right and privilege-holders. | 167,198 | 4,295 | 582,195 | 5,868 | 407 | 23,071 | 798 | 34,439 | 35,785 |
| Free grantees .. .. | 47,520 | 3,487 | 3,462 | 64 | 278 | 119 | .. | 3,938 | 7,195 |

140. The concession for free removal of grass appears in paragraph 119 supra. In *West Cuddapah* permits were issued to Guvvalcheruvu villagers for 159 cows and 200 sheep at As. 1-6, and 9 pies respectively, for grazing in Palakondas. In *East* *Central Circle.*

*Cuddapah*, free grazing of 738 cows and bulls of the ryots of Settigunta and its hamlets was allowed according to the terms of the settlement of Settigunta reserve. In *Nellore*, the concession plots granted in three reserves for felling by the Kathiras in case of necessity was withdrawn.

The statement appended below shows the particulars of free grants made during the year which were chiefly for rebuilding houses destroyed by fire. In *Bellary*, certain grants were made for plague sheds and in *Nellore* palmyra trees and leaves were granted for the construction of huts by Yerukula settlement.—

| — | Timber. | | Fuel. | | Bamboos | | Grass and grazing. | Other minor produce. | Total. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Number. | Value. | Value. | Value. | Value. |
| | | Rs. | | | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | .. | .. | .. | .. | .. | .. | 138 | .. | 138 |
| Free-grantees .. .. | 47,728 | 5,430 | .. | .. | 15,288 | 167 | .. | 313 | 5,910 |
| Total .. | 47,728 | 5,430 | .. | .. | 15,288 | 167 | 138 | 313 | 6,048 |

*Southern Circle.*

141. The privileges allowed were as usual for grazing at reduced rates in *North* and *South Vellore.*

The estimated value of free grants was Rs. 8,608 against Rs. 13,568 in the previous year. The decrease is due chiefly to cessation of supply of korambu materials to the Public Works Department in Trichinopoly district consequent on the transfer of padugai forests to that department.

The quantity and estimated value of produce removed by right-holders and free grantees are shown in the following abstract:—

| — | Timber. | | Fuel. | | Bamboos. | Grass and grazing. | Other minor produce. | Total value. |
|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value | Value. | Value | Value. | |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | .. | .. | .. | .. | .. | .. | 1,115 | 1,115 |
| Free grantees .. .. | 18,824 | 2,155 | 2,879 | 180 | 454 | 5,722 | 97 | 8,608 |
| Grants at reduced rates .. | .. | .. | .. | .. | .. | 1,995 | .. | 1,995 |
| Total .. | 18,824 | 2,155 | 2,879 | 180 | 454 | 7,717 | 1,212 | 11,718 |

*Western Circle.*

142. The following statement shows the quantity of produce removed by right-holders and free grantees and its estimated value:—

| — | Timber. | | Fuel. | | Bamboos. | | Grass and grazing. | Other minor produce. | Total. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Number. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | 15,450 | 6,180 | .. | .. | .. | .. | .. | .. | 6,180 |
| Free-grantees .. .. | 4,385 | 777 | 580 | 9 | 4,820 | 88 | 870 | 45 | 1,789 |
| Total .. | 19,835 | 6,957 | 580 | 9 | 4 820 | 88 | 870 | 45 | 7,969 |

The value of produce enjoyed by right-holders has decreased from Rs. 15,250 to Rs. 6,180. These removals are entirely from the *Mangalore* divisions and the decrease has not been explained. Free grants were as usual made in *Mangalore North* chiefly for the construction of and repairs to temples, churches and religious institutions. The grants made elsewhere were for works of public utility such as repairs to culverts and construction of foot bridges and for re-building houses destroyed by fire. The Badagas in the *Nilgiris* continued to collect fuel required by them on payment of Re. 1 per annum per house. Check over this removal is indifferent due to lack of

establishment. There are 2,500 households of which 1,778 took permits; the average value of the fuel removed by Badagas during a year is estimated to be Rs. 20,000 which amounts to a free grant of about Rs. 18,000. This system results in damage to the sholas because though in theory deadwood only is removed, actually much "dead" wood is created. Todas were allowed to graze their buffaloes in reserved forests free and the estimated value of such grazing is reported to be Rs. 779.

143. (*c*) *Outturn and sources of Forest Produce.* *Northern Circle.*

| Agency. | Timber in cubic feet including sandalwood. | | Fuel in cubic feet. | | Bamboos in value in rupees. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| By Government .. .. | 250,028 | 271,447 | 868,935 | 648,750 | 6,550 | 4,523 | 12,844 | 8,314 |
| By purchasers (including confiscation). | 1,288,226 | 906,369 | (*a*)4,459,851 | (*a*)4,074,398 | 93,180 | 1,41,664 | 2,13,695 | 2,74,819 |
| By right-holders .. .. | 184,136 | 167,198 | 582,195 | 582,195 | 552 | 407 | 24,649 | 23,869 |
| By free grantees .. .. | 86,853 | 47,520 | .. | 3,462 | 671 | 278 | 2,836 | 119 |
| Total .. | 1,809,243 | 1,392,534 | 5,910,981 | 5,308,805 | 1,00,953 | 1,46,882 | 2,54,024 | 3,07,121 |

The variations have been explained where necessary. The rates for grazing fees levied in the several divisions are shown in form 74. The number of animals licensed to grazing on permits was 575,620 against 866,732 in the previous year.

144. The following statement gives the total outturn compared with the previous year :— *Central Circle.*

| Agency of exploitation. | Timber in cubic feet including sandalwood. | | Fuel in cubic feet. | | Bamboos in number. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| By Government Agency .. | 11,071 | 19,816 | 36,063 | 24,321 | 12,200 | 1,773 | 14,701 | 8,487 |
| By purchasers (including confiscation). | 1,065,163 | 930,733 | 6,584,517 | 6,388,326 | 1,833,386 | 2,578,071 | 6,31,218 | 7,63,001 |
| By right-holders .. | .. | .. | .. | .. | .. | .. | 151 | 138 |
| By free grantees .. | 38,543 | 47,728 | .. | .. | 17,127 | 15,288 | 1,320 | 313 |
| Total .. | 1,114,777 | 998,277 | 6,620,580 | 6,412,647 | 1,862,713 | 2,595,132 | 6,47,390 | 7,71,939 |

Departmental operations have entirely ceased but small quantities of timber and bamboos were extracted for departmental buildings and fuel was obtained in clearing coupe and boundary lines.

145. The total outturn is given in the following statement:— *Southern Circle.*

| Agency of exploitation. | Timber including sandalwood in cubic feet. | | Fuel in cubic feet. | | Bamboos value. | | Minor produce including grass and grazing value. | |
|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| | | | | | Rs. | Rs. | Rs. | Rs. |
| By Government Agency .. | 19,338 | 17,281 | 62,294 | 70,432 | 201 | 289 | 531 | 533 |
| By purchasers .. .. | 920,866 | 798,338 | 4,777,552 | 4,239,113 | 1,01,789 | 1,10,692 | 3,82,215 | 3,76,879 |
| By right-holders .. .. | .. | .. | .. | .. | .. | .. | 2,405 | 1,115 |
| By free grantees .. .. | 90,493 | 18,824 | 3,984 | 2,879 | 303 | 454 | 5,267 | 5,819 |
| Total .. | 1,030,697 | 834,443 | 4,843,830 | 4,312,424 | 1,02,293 | 1,11,435 | 3,90,118 | 3,84,346 |

The variations have already been explained. The rates for grazing fees levied in the several districts are shown in form 74. The number of animals licensed on payment was 1,059,589 against 1,267,224 in the previous year.

(*a*) Corrected in the Board's office.

*Western Circle.*

146. The outturn of produce collected by different agencies is compared with that of the previous year in the following abstract :—

| Agency of exploitation. | Timber including sandalwood in cubic feet. | | Fuel in cubic feet. | | Bamboos in number. | | Minor produce including grass and grazing in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| By Government Agency. | 437,121 | 308,807 | 640,149 | 621,608 | 98,757 | 111,911 | 24,151 | 20,518 |
| By purchasers .. | 468,886 | 379,143 | 3,937,306 | 3,218,887 | 7,303,240 | 5,613,348 | 1,47,014 | 1,37,368 |
| By right-holders .. | 36,175 | 15,450 | .. | .. | .. | .. | 780 | .. |
| By free grantees .. | 3,761 | 4,385 | 340 | 580 | 8,920 | 4,820 | 270 | 915 |
| Total .. | 945,943 | 707,785 | 4,577,795 | 3,841,075 | 7,410,917 | 5,730,079 | 1,72,215 | 1,58,801 |

*By Departmental agency—Major produce.*—The decrease under "timber" was chiefly in *South Malabar* and *South Coimbatore* due in the former to the smaller yields from the thinnings made in the plantations and from wind blown trees, and in the latter to the stoppage of felling in the Tekadi leased forests pending transport of a large stock of timber remaining in the forests, while that under "fuel" was due generally to the extension of contract system and to stoppage of fuel fellings in Bargur range in *North Coimbatore* for want of demand. *Minor produce.*—The increase under "bamboos" was due to a larger number extracted in *South Malabar* for rafting timber. *Other produce.*—The total outturn was 55 tons against 96 tons in the previous year; the decrease was mainly in *North Coimbatore* due to transfer of collection to private agency.

*By purchasers.*—The outturn under this head is generally unreliable partly owing to inaccurate yield figures given by coupe purchasers. The decrease under "*Major produce*" was due partly to a general fall in the number of applications for darkhast lands and in the removals from unreserved lands; the revenue officers have not explained the variations under these heads. The non-sale of Chedleth timber coupes in *North Malabar* for want of demand and a smaller outturn of timber from the fuel coupes in *South Coimbatore* accounted to some extent the fall under "*timber*". *Minor produce.*—The outturn of "bamboos" fell by over two millions in *North Coimbatore*; there were small increases in *Central* and *South Coimbatore* and in *Kollegal*. The decrease under other produce was mainly in *South Canara* due to lower prices realized for leases.

## CHAPTER III.—FINANCIAL RESULTS.

*Northern Circle.*

147. The financial results compared with those of last year and the average of the five preceding years show a net increase of Rs. 33,860 and Rs. 1,28,163 respectively.

| Items. | 1915-16. | 1914-15. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. .. .. | 7,44,905 | 7,70,393 | 7,76,649 |
| Expenditure "A. Conservancy and Works" inclusive of "Refunds." | 2,90,501 | 3,33,624 | 4,54,251 |
| Expenditure "B. Establishments" .. .. .. .. | 3,81,641 | 3,97,866 | 3,76,798 |
| Total expenditure .. | 6,72,142 | 7,31,490 | 8,31,049 |
| Net results .. | + 72,763 | + 38,903 | — 55,400 |

The gross receipts were less than those of the previous year and the average by Rs. 25,488 and Rs. 30,744 respectively.

The gross revenue and the net revenue of *Gōdāvari Lower*, are the highest on record since the division was constituted.

The expenditure under "A. Conservancy and Works" including refunds is less than that of the previous year and the average by Rs. 43,123 and Rs. 1,63,750

respectively. The net results show an increase of Rs. 72,763. This is chiefly due to the change of system from departmental to contract working and to the curtailment of expenditure on capital works on account of the war.

About 38 per cent of the expenditure was devoted to the upkeep and improvement of the forests and 62 per cent to exploitation, etc.

The outstanding revenue at the commencement of the year was Rs. 77,846 and the value of the sales amounted to Rs. 7,74,066. Out of the total of Rs. 8,51,912, Rs. 7,44,905 were collected, leaving an outstanding balance of Rs. 1,07,007.

### Receipts.

(i) *By Departmental Agency.*

*Timber.* —Rs.14,302 due to extraction of a smaller quantity of timber in *Ganjām*, to non-realisation of revenue from timber in the Bointi unreserves in *Vizagapatam* and to the anticipated number of coupes for improvement fellings and thinnings not having been worked in *Kurnool South*.

*Fuel.* — Rs. 12,549 due to diminution in the yield of the Kandikuppa plantation in *Gōdāvari Lower* to no casuarina plantations in the *Kistna* division having been sold during the year and to a smaller extraction of fuel in *Kurnool West* as the Sim's line which was widened during the year contained less fuel than was anticipated.

*Bamboos.* — Rs. 1,966 due to leasing of coupes to contractors.

*Minor produce.* — Rs. 2,187 due to non-collection of Kamala powder and *Bassia latifolia* in *Ganjām* owing to difficulty experienced in disposing of the previous year's stock.

(ii) *By Purchasers.*

*Timber.* — Rs. 31,655 due to fall of revenue under indent system in *Ganjām*, to reduction in demand from Public Works Department in *Gōdāvari Upper* and to restrictions placed upon removals of timber from Rampa in *Gōdāvari Lower*.

*Fuel.* — Rs. 47,685 due to the smaller number of coupes sold and to a less demand for permits owing to disafforestation of certain reserves in *Ganjām*, to less demand from Public Works Department for fuel for brick and lime burning in *Gōdāvari Upper*, and to special increase under this head in the previous year in *Gōdāvari Lower* owing to the sale of Bendamurlanka casuarina plantation.

*Bamboos.* + Rs. 28,739 due to better prices obtained in *Gōdāvari Upper* and to abnormal demand in *Gōdāvari Lower* for building and sugarcane purposes.

*Grazing and fodder grass.* — Rs. 1,035 due to disafforestation of certain reserves and to cattle-mortality in *Ganjām* and to the introduction in *Kurnool West* of the new system of collecting grazing revenue for foreign cattle in pentas, under which the graziers are required to pay fees for the whole year instead of purchasing quarterly permits.

*Other produce.* + Rs. 49,489 due to enhancement of rates of tree-owners' fees in *Gōdāvari Lower* and to better prices realised in *Cassia auriculata* bark sales in *Kurnool West*.

(iii) *Miscellaneous (including confiscated drift and wayfwood).*

*Revenue.* +Rs. 7,663 due to efficient check exercised by the river-checking staff in *Gōdāvari Lower* and to the fluctuating nature of the items.

### Expenditure.

*A. Conservancy and Works.*

The total expenditure was less than that of the previous year by Rs. 35,268 and the decrease was chiefly due to less departmental operations and to the curtailment of expenditure on capital works on account of the war.

*B. Establishment.*

The decrease of Rs. 16,225 was due to the posting of a lower grade Conservator to the circle and to the posting of a junior Extra Assistant Conservator to the charge of the Vizagapatam district.

In the Northern Circle, perhaps more than any other, for many years past as regards major forest produce we have been encroaching on our capital, and consequently for many years to come we have to restore that depreciated capital and cannot anticipate any increase in revenue. But the contrary is the case in the matter of minor forest produce, bamboos and grazing, and we have a right to expect considerable development of these sources of revenue in the immediate future. For some months past I have requested the District Forest Officers to make every effort to expand the revenue from minor forest produce and bamboos by giving contracts for two years instead of one, if desirable, and by offering the lease of products hitherto untouched. The present stimulus to industrial enterprise and the post-war conditions will doubtless greatly facilitate our efforts in this direction. The bark of the babul and mangrove and the fruit of babul, *Phyllanthus* and *Terminalia chebula* have been either not at all or to a very slight extent utilized as tannin-producing material. There is large scope also for the exploitation of forest fibres.

Match factories and pulp installations should enormously appreciate what were formerly considered "useless" species. It is particularly unfortunate that at the present juncture we have hardly any marketable timber in the circle, as England will probably for many years to come take every stick that its dependencies and foreign countries can supply.

With reference to grazing it is now an accepted principle that the actual fees are for the most part far below the market value of the pasture offered. Enhancement is consequently to be anticipated.

*Central Circle.*

148. The financial position of the year compared with that of the previous year and the quinquennial average is shown in the following abstract :—

| — | 1915-16. | 1914-15. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. | 11,80,976 | 10,90,120 | 11,21,429 |
| *Expenditure.* | | | |
| A.—Conservancy and works including refunds. | 1,95,479 | 2,51,895 | 3,83,145 |
| B.—Establishments .. .. .. .. | 3,81,218 | 3,99,058 | 3,62,060 |
| Total of A and B . | 5,76,697 | 6,50,953 | 7,45,205 |
| Net results .. | + 6,04,279 | + 4,39,167 | + 3,76,224 |

The net results show a surplus of Rs. 6,04,279 against one of Rs. 439,167 in the previous year and of Rs. 3,76,224 the quinquennial average. Of the receipts 23 per cent were realised from major produce, 27 per cent from grass and grazing, 37 per cent from minor produce and 13 per cent from miscellaneous items. About 38 per cent of the expenditure was devoted to the upkeep and improvement of the forests and 62 per cent to exploitation, etc. It will be observed from Form No. 79 that the value of timber and other produce at sale depots at the close of the year amounted to Rs. 1,049 against Rs. 720 at its commencement. The revenue outstanding was Rs. 2,01,667-5-7 of which Rs. 7,082-1-7 fell due within the year.

The important variations between the actuals of the year and those of the previous year are explained below :—

RECEIPTS.

(i) *By Departmental Agency.*

The variation under *timber* is due to cessation of departmental operations and non-extraction of timber from Kodur-Upparapalli plantations in *East Cuddapah* as was done in the previous year, that under *bamboos* and *sandalwood* is small and calls for no remarks. Under *fuel* the decrease is due to alterations effected during the year on account of wrong credit made last year under this head and under *minor forest produce* to the realisation in 1914-15 of revenue belonging to the year preceding it.

| | Rs. |
|---|---|
| *Timber* ... ... ... ... | — 1,680 |
| *Fuel* ... ... ... ... | — 7,576 |
| *Bamboos* ... ... ... ... | + 9 |
| *Sandalwood* ... ... ... | — 229 |
| *Minor forest produce* ... ... | — 7,462 |

(ii) *By Purchasers*

The decrease under *timber* is due to a falling off in the sale of trees on darkhast lands in *Bellary*, *Anantapur*, *Nellore*, *Chingleput* and *Chittoor* and that under *fuel* is due chiefly to low prices secured for Sriharikota fuel coupes in the *Nellore* district, to want of competition for fuel coupes in *East Cuddapah* and to the restriction in the issue of permits for unreserves in *Chittoor*.

| | Rs. |
|---|---|
| *Timber* ... ... ... ...— | 3,871 |
| *Fuel* ... ... ... ...— | 45,711 |
| *Bamboos* ... ... ... ...+ | 3,013 |
| *Grazing* ... ... ... ...+ | 19,623 |
| *Minor forest produce* ... ...+ | 1,08,660 |

Increase under *bamboos* is due to better prices realized in *Bellary and East Cuddapah*. The rise in the *grazing* revenue is due to enhanced grazing fees in the *Guntūr* district, and to the extension of the Kancha system in *Nellore*. Under *minor forest produce* the increase is due to the very favourable sales of tangedu bark in *Bellary*, *West Cuddapah and East Cuddapah* and to increased amaroy revenue in the last-named district, to the collection during the year of the suspended tangedu kists belonging to the previous year in *Anantapur*, to the increased revenue from toddy-yielding trees on account of enhanced fees in *Anantapur*, *Guntūr* and *Nellore*, and to the larger number of trees tapped in other districts.

(iii) *Miscellaneous (including confiscated drift and waif-wood).*

+ Rs. 26,080. The sale of fallow forest lands in *Nellore* district chiefly contributed to the increase.

EXPENDITURE.

*A.—Conservancy and Works.*

— Rs. 54,337. The main reasons for the decrease were —

Restricted programme of building works in all districts except *West Cuddapah*, the curtailment of cultural operations in *Bellary*, less expenditure on fire protection operations in *Anantapur* and to the absence of any large expenditure on account of compensation for acquisition of land in *Guntūr* as in last year.

*B.— Establishment.*

— Rs. 17,840. Decrease due mainly to the posting of an Extra Assistant Conservator and Assistant Conservator in charge of *Anantapur* and *Chittoor* districts respectively which were held by Senior Deputy Conservators in the previous year.

Great care was exercised during the year in according sanction to works and in making recommendations for any extra establishment. Only works deemed to be of urgent necessity or revenue-producing were sanctioned and those which could wait were held back for more prosperous times. Similarly no recommendations for increase of establishment save in the most exceptional circumstances of real necessity were made. Everything was subordinated to the necessities of the war in the matter of expenditure in the department. More prosperous days are hoped for and will come, it is hoped, before long; for the department has been struggling against adversity and the most difficult conditions for many years past now.

149. The following abstract compares the financial position of the year under report with that of the previous year and the average of the preceding quinquennium :— *Southern Circle.*

| —— | 1915-16. | 1914-15. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 10,40,794 | 12,45,251 | 13,38,391 |
| *Expenditure.* | | | |
| A. Conservancy and works (including refunds). | 2,09,604 | 2,38,364 | 3,37,183 |
| B. Establishments .. .. | 3,70,506 | 3,84,569 | 3,57,710 |
| Total expenditure .. | 5,80,110 | 6,22,933 | 7,94,893 |
| Surplus .. | 4,60,684 | 6,22,318 | 5,43,498 |

The net results show a surplus of Rs. 4,60,684. This large fall, as compared with previous years, is the natural outcome of the policy of selling the valuable casuarina plantations, divesting ourselves of the Trichinopoly padugais and generally concentrating work on hill rather than plains forest. The revenue decreased by Rs. 2,05,451 and the expenditure by Rs. 42,823. Of the receipts 43·8 per cent was from major produce, 47·7 per cent from minor produce and 8·5 per cent from miscellaneous sources. 3·4 per cent of the expenditure was spent on exploitation, 38·8 per cent on the upkeep and improvement of the forests and 57·8 per cent on miscellaneous items. The proportion of net to gross revenue fell from 50 per cent to 44 per cent. The outstanding revenue at the close of the year was Rs. 2,84,320 of which Rs. 25,002 fell due within the year. The estimated value of timber and other produce at sale depots at the close of the year was Rs. 52,093 against Rs. 51,851 at the commencement of the year.

## Receipts.

The important variations between the actuals of the year under report and those of the previous year are explained below :—

### (i) *By Departmental Agency.*

*Sandalwood* + Rs. 63,827. Due to the fact that more energy was shown in the extraction of dead and dying trees in the sandalwood areas and to the fact that the market for sandal improved considerably.

### (ii) *By Purchasers.*

*Timber* —Rs. 14,218. This is always a variable head depending as it does chiefly on the revenue derived from the sale of trees on darkhast lands.

*Firewood* —Rs. 2,11,912. Due to the sale of casuarina plantations in South Arcot and Tanjore districts in 1914–15 which largely increased the revenue of that year.

*Bamboos* + Rs. 14,955. Due to the collection during the year of an instalment relating to the previous year in North Salem and to the reasons explained in paragraph 135 supra.

*Grazing* —Rs. 22,784.
*Minor produce* —Rs. 2,863. } Due to reasons explained in paragraph 138 supra.

## Expenditure.

### *A.* " *Conservancy and Works.*"

The expenditure under A. Conservancy and Works decreased by Rs. 28,436 as compared with that of the previous year. The decrease was chiefly under A-II, A-VII and A-VIII due to less commission paid to permit issuing officers owing to reduced collections under II (*d*) and II (*e*), curtailment of expenditure under communications and buildings owing to financial stringency, the abandonment of cultural operations and the reduction in the number of watchers.

### *B.* " *Establishment.*"

The expenditure fell short of the previous year's by Rs. 14,063. The decrease occurs chiefly under I (*b*) Rs. 5,839 and contingencies Rs. 6,422.

*B. I* (*b*).—Due to the non-posting of an Extra Assistant Conservator to South Vellore for a greater portion of the year and to the posting of junior officers to South Vellore and Tinnevelly.

*Contingencies.*—Due to there having been no adjustment during the year of the cost of uniforms and warm clothing to forest subordinates as in the previous year.

150. The financial position of the year is compared with that of the previous year and the average of the preceding quinquennium in the following abstract:— *Western Circle.*

| — | 1915-16. | 1914-15. | Previous quinquennial average. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 9,71,800 | 9,12,063 | 8,13,730 |
| Expenditure— | | | |
| Refunds .. .. .. .. | 2,683 | 6,208 | 4,790 |
| A. Conservancy and Works .. | 3,98,094 | 5,59,205 | 4,59,655 |
| B. Establishments .. .. .. | 3,73,794 | 3,65,862 | 3,57,506 |
| Total expenditure .. | * 7,74,571 | 9,31,275 | 8,21,951 |
| Net .. | + 1,97,229 | — 19,212 | — 8,221 |

* Excludes Rs. 1,144 under "A. Conservancy and works" and Rs. 3,285 under "B. Establishments" incurred by the Working Plans Officer in June 1916, which relate to the Southern Circle.

The net results show a surplus of Rs. 1,97,229 against a deficit of Rs. 19,212 in the previous year and surpass any previous record for the circle. The gross receipts of the year exceeded those of the preceding year and the quinquennial average by Rs. 59,737 and Rs. 1,58,070 respectively. Fifty-nine per cent of the revenue was derived from major produce, eight per cent from grass and grazing, 13 per cent from minor produce and the balance 20 per cent from miscellaneous sources. Of the expenditure, 34 per cent was incurred on the exploitation of forests, 34 per cent on their upkeep and improvement and 32 per cent on miscellaneous items. The estimated value of the produce at sale depots at the end of the year was Rs. 68,147 against Rs. 24,261 at its commencement. The revenue outstanding was Rs. 1,03,635 of which Rs. 62,612 fell due within the year. The increase in outstandings is mainly due to sums due for estates on the Anamalais, on account of which about Rs. 40,000 has been collected since the end of the year.

The important variations between the actuals of the year and those of the previous year are explained below:—

### Receipts.

#### (i) *By Departmental Agency.*

*Timber* + 59,800. The increase was chiefly in *North Malabar* due to a special sale of rosewood, and to larger sales in the *Nilgiris*, *South Coimbatore* and *South Malabar*.

*Fuel* — 21,976 due chiefly to the extension of contract system partly counterbalanced by increased demand in the *Nilgiris*.

*Bamboos* + 3,273. Due to a larger number of bamboos used for rafting in *South Malabar*.

*Sandalwood* + 7,496. Due to better prices realised and to the increased outturn in the *Nilgiris* and *Kollegal*.

*Minor produce* — 4,110. Chiefly in *North Coimbatore* due to stoppage of departmental collection.

#### (ii) *By Purchasers.*

*Timber* — 21,683. Due chiefly in *North Malabar* to non-sale of timber coupes in Chedleth for want of demand, and in *Kollegal* to fluctuations in the revenue from darkhast lands.

*Bamboos* + 15,469. Due to better prices realised for coupes and to the credit of previous year's revenue in *North Coimbatore* and to sale of a larger area in *South Coimbatore*.

*Grazing* — 5,567. Due to a smaller number of foreign cattle licensed for grazing in *Kollegal* owing to the favourable early rains in Mysore and Salem and to prevalence of cattle disease in *North* and *South Coimbatore*.

*Fuel* — 2,249
*Minor produce* — 673
} Call for no special remarks.

(iii) *Miscellaneous (including confiscated drift and waifwood).*

+ 29,923. Due chiefly to better prices realised by the sale of elephants and to the increases in the demand on account of additional lands leased out and of rents from estates on the Anamalais.

EXPENDITURE.

*A. Conservancy and works* — 1,61,111. The expenditure was abnormal last year due to the acquisition of Mudumalai and Kumbarakolli leased forests in the *Nilgiris*.

*B. Establishment* + 7,932. The increase was chiefly under "Salaries" and "Allowances" and was due to the posting of an Extra Deputy Conservator and a probationer to the circle and of two Extra Assistant Conservators for special works in the *Nilgiris*, to promotion of one Extra Assistant Conservator to class of Extra Deputy Conservator and of two Rangers to Extra Assistant Conservator's grade, to increments under the time scale of pay and to debit of a portion of the pay of the special officer for the introduction of the forest panchayat scheme.

## CHAPTER IV.—ADMINISTRATION.

*Northern Circle.*

151. *New District Forest charges.*—No new District charges were formed during the year. Proposals for the formation of a fourth division in the Kurnool district are being formulated by the Collector. This will give much needed relief to the District Forest Officers of Kurnool South, and West whose present charges are in each case beyond the scope of one District Forest Officer. The same remark applies to the Upper Gōdāvari District Forest Officer's present charge.

152. *New ranges.*—There were no changes.

153. *Conduct of establishment.*—On the whole satisfactory. Special mention must be made of the good work of Rangers, P. Raman Menon, B. Punniah, N. S. Anantacharlu, V. S. Subrahmanya Ayyar, M. Hussain Khan, K. P. Benjamin, J. D. David, C. G. Ganapathi, A. Rama Hebbar and M. Krishna Rao and Deputy Rangers, S. Raghavulu, Behara Bhagirathi, M. Narasinga Rao Nayudu, Aga Mirza Sahib, T. Khasim Sahib, B. S. Sankaram, S. E. Thomas and T. G. Venunatha Rao. The following punishments were inflicted: Three Rangers were temporarily reduced, one Deputy Ranger was sentenced to imprisonment, two were dismissed, two removed, one was suspended and five were reduced.

*Protective staff.*— The conduct of this branch showed improvement in some divisions; but the list of punishments still continued to be long. One Forest Guard was convicted; one Forester, eight Forest Guards, nine Watchers, one Tannadar and one Permit-issuing Gumastah were dismissed; two Foresters, 19 Forest Guards, 49 Watchers, 13 Tannadars and one Permit-issuing Gumastah were removed; five Foresters and seven Forest Guards were reduced; five Foresters, one Plantation Overseer, 28 Forest Guards, 23 Watchers, 12 Tannadars and one Permit-issuing Gumastah were suspended. Where feasible I think that reduction is a more suitable punishment than suspension: the latter being reserved as a temporary expedient to meet an emergency.

*Ministerial staff.*—Its work and conduct are reported to be satisfactory in all divisions except *Kurnool West*. From my own experience of the Circle I am unable to endorse this opinion in some cases. There is far too general a tendency to delay important and urgent papers at times to the detriment of the interests of a subordinate. But until the present prospects of a District Forest office staff are ameliorated matters are not likely to improve, unless a District Forest Officer exercises very rigid control over his office. One Range peon was dismissed, two Accountants of a District Forest office, one Range clerk and one District Forest office peon were reduced, two Head clerks of a District Forest office, two Range clerks and one District Forest office peon were suspended and one Range clerk was convicted of misappropriation. The Head clerk of the *Kurnool West* District Forest office was compelled to retire on account of incompetency.

The work of the Direction office has not been satisfactory. Files have been delayed for months and even years, papers have been mislaid, and business has been transacted in an unmethodical manner. But I am convinced that nearly every clerk in the office has worked hard and that the unsatisfactory results have been due to lack of control, of training, and of business-like methods, and not to want of industry. Reforms have now been introduced and I anticipate that the present year's working will show considerable improvement.

154. *Health of the establishment and casualties.*—The health of the establishment continued to be bad except in *Kistna*, the usual malady being malaria. It was as usual particularly prevalent in *Ganjām*, *Gōdāvari Upper*, and *Nallamalais* One Ranger, one Deputy Ranger, one Forester, three Forest Guards, one Tannadar, seven Watchers, one District Forest office clerk, one Range clerk and one Range peon died. The District Forest Officer, *Kurnool East*, suggests the appointment of an itinerating Sub-Assistant Surgeon to give prompt help to subordinates working in the Nallamalais; but the Collector doubts the necessity for a special Sub-Assistant Surgeon, as the principal trouble is malaria and there is no need of a special man to administer quinine. Medicines are supplied to Range officers and they are instructed in the principles of dealing with malaria.

The District Forest Officer, *Upper Gōdāvari*, similarly asks for a Sub-Assistant Surgeon to be deputed to accompany him on tour.

It is a misfortune in this circle that there are very few healthy ranges, and that it is therefore extremely difficult to give to a Ranger, who has partially broken down, a change that will benefit his health.

155. *Relations between Revenue and Forest officials* continued to be satisfactory.

156. *Service books* were maintained and verified in all divisions.

157. *Tour of Forest Member.*—The Hon'ble Mr. H. F. W. Gillman toured in Russelkonda, Mojjagoda and Kukuluba ranges of the *Ganjām* district.

158. *Tours of the Conservator.*—Mr. A. W. Lushington was in charge of the circle up to 21st September 1915 and Mr. F. L. C. Cowley-Brown subsequently. These two officers spent 173 days in camp visiting all the divisions in the circle. All District Forest offices were inspected during the year. With the increase in intensity, complexity, and extent of working the circle is rapidly becoming too big for adequate control if the highest efficiency is to be maintained. If the Conservator happens to be in a remote portion of the circle and the Upper Gōdāvari District Forest Officer is at the northern end of Nugur taluk at least five weeks must elapse before an answer to a letter between these two officers can be obtained. Similarly transfers of Rangers from one end of the circle to the other involve long and unproductive delays.

159. *Inspection of Range offices.*—All the Range offices except Chelama and Giddalore in Kurnool South were inspected by the respective District Forest Officers.

160. *Audit of accounts of District Forest offices.*—The accounts of 1915-16 of Gōdāvari Lower were audited by the Auditors from the Accountant-General's office. Accounts of 1914-15 of the remaining divisions were audited during the year.

161. *The Madras Forest College.*—Out of the five students deputed for 1914-16 course, two obtained Higher standard certificates and two Lower standard certificates and one failed. Of the six students deputed for 1915-17 course, one was sent back as unfit to follow the course; the rest are undergoing training. Six Government students were deputed for the course commencing from 1st August 1916.

162. *Vernacular Training School for Foresters and Forest Guards.*—The Vernacular Training School at Rudravaram for the session ending 30th July 1916 was started with 30 students. Owing to illness, six Forest Guards were withdrawn from the school. Of the remaining 24, 15 passed in the first class and eight in the second class and one failed. Several changes were introduced into the curriculum with a view to eliminating the previous tendency to make the course too theoretical and far beyond the average student's capacity for assimilation.

I regret that the Senior Instructor, of whose zeal and keenness there was no question, failed to co-operate in the introduction of these modifications.

163. *Work and service of Superior officers.*—The work of Messrs. Minchin, Master, Lasrado, Seager, Madan, have been favourably commented on by the respective Collectors.

I am of opinion that every Imperial officer and with one exception every Provincial officer has worked in the forests devotedly. I have for the most part nothing but praise for their field work, although I noticed one or two sylvicultural errors, and one lapse in the matter of the patrol system. With such a high average of conscientious effort it is almost invidious to single out individual cases for mention, but I feel that the general work of Messrs. Minchin and Lasrado in *Ganjām* and of Mr. Abdul Quadir in *Vizagapatam*, the fire protection of Mr. Thompson in *Kurnool South* (in spite of an only partially successful season), and control of the Koyas by Mr. Rigold in *Upper Gōdāvavi* should not pass unrecorded.

Mr. Stracey's work has been of great help to me.

The control over the District Forest office in some cases has not been quite as satisfactory as I could have wished and in one case markedly the reverse, but I feel that matters are rapidly improving.

Mr. A. W. Lushington, C.I.E., Conservator of Forests, first grade, retired from the service on 21st September 1915.

*Central Circle.*

164. Mr. S. Cox held charge of the circle until 17th December 1915 and Mr. H. B. Bryant for the remaining period of the year. During the year the system of administration in the Presidency has undergone a great change consequent on the issue of G.O. No. 260, Revenue, dated 7th February 1916. The Government has by the issue of this order sought to place District Forest Officers in this Presidency in a more independent position than they have hitherto occupied. The object of the Government Order is that whilst retaining the general powers and authority of the Collector as head of the district for the welfare of the community in general, to leave in the hands of the District Forest Officer and Conservator all purely sylvicultural and departmental matters. The change is bound to be productive of good results although difficulties will surely arise which will have to be met and surmounted as they occur. From the point of view of the Forest Administration the important question is that the District Forest Officer should not, by gaining independence of the Collector's interference in departmental matters, lose the assistance which he hitherto has got or ought to have got from the Revenue Officers such as Tahsildars, etc. If the Government Order is worked on sensible lines there seems no reason why he should do so, but there can be no doubt that the danger exists. The working of the new arrangement will more than ever depend on the whole-hearted cooperation of the Collector and the District Forest Officer of the district, and since in the past, this has generally stood a far greater strain, there is no justifiable reason to doubt that it will be equal to the demands of the present and future.

165. *District and Range charges.*—Administrative sanction of Government has been obtained for the trifurcation of *Cuddapah* district but the sanction of Government in the Financial department is awaited. Two of the existing ranges in *Nellore* district were amalgamated. Sanction for the division of the present Tirupati range and a portion of Madanapalle range, *Chittoor* district into two ranges, viz., Mamandur and Chamala was accorded during the year and it is to take effect from 1st October 1916. Portions of Gorivikanama and Dorigallu reserves of *Cuddapah* district and of Iswaramala reserve of *Chittoor* district were transferred to Kadiri range of *Anantapur* district.

166. *Work of superior officers.*—Only Collectors of *Nellore* and *Chittoor* have offered remarks on their District Forest Officers and others have not. Mr. R. Ramachandra Rao, Collector of Nellore, remarks that Mr. Arbuthnot has worked hard and well during the year and is popular with the public. A good deal of the progress in Kancha system is specially due to him. Mr. Devadasan also discharged his duties satisfactorily. Mr. H. L. Braidwood, Collector, Chittoor, writes as follows: "So far as I have been able to judge Mr. Sathe's work has been decidedly good."

*Conservator's remarks.*—Mr. T. A. Whitehead in *East Cuddapah* has worked with his usual zeal and ability. Mr. Arbuthnot in *Nellore* has done well specially in the matter of pushing the system of Kanchas in the district. Mr. G. Venugopaul Nayudu in *Anantapur* has succeeded in tightening up the Forest Administration of

the district a good deal. Mr. D. L. Sathe although only in charge of *Chittoor* for part of the year is getting a good grasp of district work and only needs experience to enable him to develop into a thoroughly efficient officer. Mr. Raju Naicker has done his best in *West Cuddapah* wherein working plan work is now much needed. The administration in *Bellary* was characterised by inefficiency under Mr. Thornton and that in *Chingleput* cannot be commended under M.R.Ry. K. Gajaraja Mudaliyar. In *Guntūr* M.R.Ry. M. Panchapakesa Ayyar worked hard to improve the administration of a very backward district. Mr. S. V. Devadasan, M.R.Ry. K. G. Belliyappa and M.R.Ry. E. V. Padmanabha Pillai did well in their respective spheres of work during the year.

167. *Executive staff.*—The work and conduct of rangers in the circle leave much to be desired. There are some keen and good officers who conscientiously strive to do their best to carry out their duties to Government efficiently but they are exceptional to the rule but many there are, as stated in last year's report, with no interest in their profession and with no intention of doing more work than serves to keep them in the service. This is a most regrettable fact and one which, it is to be hoped, will disappear when the long overdue reorganization of this branch of the department is taken in hand and finally sanctioned. Until this has been done there is, it is to be feared, little prospect of much improvement. During the year three rangers were reduced, one was dismissed and the services of one were dispensed with and one resigned.

168. *Protective staff.*—The conduct of the staff is by no means satisfactory. Four foresters were reverted, seven were reduced, seven were suspended, seven removed from service and one resigned. Among the guards six were reduced, 63 suspended, 87 removed from service and nine resigned. The present unsatisfactory state of the Protective establishment is due partly to their poor pay and prospects, and partly to the inferiority of many of the rangers under whom they have to work. Reorganization is urgently called for with regard to this branch also.

169. *Ministerial establishment.*—The work is reported to be satisfactory in all districts except *East Cuddapah* and *Nellore*. The Conservator considers that there is much room for improvement in every District Forest office of the circle.

170. *Health of establishment and casualties.*—Health of establishment is reported to be generally good in all districts except *Bellary*. One head clerk, one second clerk, one forester and one guard of *Bellary* district, one deputy ranger and one guard in *Anantapur* died of malaria fever. Two guards were murdered and one range clerk died of drowning in a well in *Nellore* district.

171. *Relations between Revenue and Forest Officers*—reported to be cordial throughout the circle. The Conservator considers that in some districts there is a great want of co-ordination between the two departments and that the correct relationship between Revenue and Forest Officers is in many localities not properly understood. There is much room for improvement in this matter.

172. *Service books*—were maintained and verified in all the districts.

173. *Tours of the Forest Member.*—The Forest Member inspected a portion of forests of the *Chingleput* district and his notes of inspection were communicated in B.P. Forest No. 53, dated 10th April 1916.

*Touring of the Personal Assistant to the Forest Member.*—Inspected the reserves of *Bellary* and *Chingleput* districts and visited *Guntūr* district also.

174. *Conservator's inspection.*—The Conservator was on tour for 192 days. All the District offices except *Bellary* and *Anantapur* were inspected during the year. Portions of forests in *West* and *East Cuddapah*, *Nellore*, *Chingleput* and in *Chittoor* were inspected and inspection notes submitted. The offices of *Bellary* and *Anantapur* were inspected in July 1916.

175. *Touring of District Forest Officers.*—The minimum period of touring required was exceeded in all districts except *West Cuddapah* where there was a slight deficiency.

176. *Inspection of Range offices.*—All the Range offices were inspected except Nellore range of the *Nellore* district.

177. *Audit of accounts of District Forest offices.*—The accounts of all the districts except *Bellary* were inspected by the Assistant Inspector of Local Fund Accounts and the general result of inspection was satisfactory.

178. *Imperial Forest College, Dehra Dun.*—No probationer was deputed from this circle during the year.

179. *The Madras Forest College, Coimbatore.*—Five deputy rangers were deputed to the college during the year. One ranger returned from college with honours certificate and three failed and one died at the college. The result was anything but satisfactory.

180. *Vernacular Training school.*—The school was held in *Nellore* district and twenty-seven guards underwent training. The school did good work under the instructor M.R.Ry. V. N. Seshagiri Rao and his assistant M.R.Ry. A. Ranganayukulu Nayudu and the District Forest Officer took a good deal of interest in connection with its management.

*Southern Circle.*

181. The year has been fruitful in administrative changes.—

(1) The position of the Collector and District Forest Officer was completely altered by the issue of G.O. No. 260, Revenue, dated 7th February 1916. As a result of this Government Order a great deal of extra work has been thrown on the Conservator more especially in the matter of appeals.

(2) The Government have accepted in the Tiruppattur Javadis the principle that the management of cultivated lands on the hills should be vested in the District Forest Officer who will be in the same relation to the Collector as a Divisional Officer.

This principle was advocated by Mr. Cherry in 1883 for the whole of the hill forests of Salem and has from time to time received the support of Revenue and Forest Officers.

(3) The application of the principles advocated by the Forest Committee has led to somewhat revolutionary proposals in the South Arcot and Trichinopoly districts. It was decided, after tours by the Forest Commissioner, his Assistant Mr. Davis and the Conservator, that the department should gradually give up all plain forests either for cultivation or for panchayat management. As a result these two districts will eventually cease to be forest divisions, and work will be concentrated in the true forest districts of North Arcot and Salem.

(4) The control of the Forest Engineer was transferred from the Public Works Department to the Forest Department, and Mr. F. J. Marshall, the Forest Engineer of this circle, has been instructed to organise an Engineering Branch of the Forest Department.

182. *Special duty.*—Mr. E. A. Davis was placed on special duty to settle the question of further reservation in Attur taluk and as a result has proposed to reserve about 50 square miles in the Pachamalais and Kollimalais. Mr. T. N. Hearsey on special duty for "spike" investigation has made some interesting discoveries of phylloxera-like bugs which appear to be producing a phyllody similar to spike in many kinds of trees and shrubs.

183. *Circle charge.*—Mr. P. M. Lushington was in charge of the circle throughout the year.

184. *Divisional charges.*—The bifurcation of the South Vellore division was sanctioned during the year, but the new district will not be formed till October. A revised description of the common boundary between the North and South Vellore divisions was published, transferring the sandal areas from the North to the South Vellore division.

The padugai forests on the Cauvery and Coleroon which were under the control of the Forest Department in Trichinopoly, Tanjore and South Arcot districts were transferred to the control of the Public Works Department during the year.

The Vandamalai-Rangamalai reserve was transferred from Trichinopoly to Madura.

185. *Range charges.*—The sub-division of the Tiruppattur range was sanctioned but the new range was not actually formed till 1st August 1916.

With the transfer of padugais to the Public Works Department the Kulittalai range in Trichinopoly was abolished and the Udayarpalaiyam range was amalgamated with Perambalur. The Tanjore range was abolished and the forests transferred to the Cuddalore range of the South Arcot district.

186. *Work of superior officers.*—Mr. H. A. Latham was selected to act as Conservator of the Western Circle in April 1916. Mr. A. B. Jackson's vigour and energy in Madura have been specially commended by the Collector.

Mr. K. R. Venkatarama Ayyar has shown exceptionally good work in the heavy district of South Vellore. He was promoted to the class of Extra Deputy Conservator with effect from 1st March 1916.

Mr. C. C. Wilson was very energetic and has done much useful work in connection with working plans.

187. *Executive staff.*—The work and conduct of the rangers was generally satisfactory.

*Rangers.*—K. L. Muniswami Ayyar, T. G. Sankaran Nayar and A. K. Kandan have all done good work. A ranger and a deputy ranger were convicted under section 304 (*a*) of the Indian Penal Code. One ranger was dismissed from service for having placed himself under pecuniary obligation to a contractor. His appeal has not yet been disposed of. One ranger was reduced temporarily to deputy ranger and transferred to the Western Circle.

*Deputy Rangers.*—This class has now been divided into—

(1) men educationally qualified to go through the College class and become rangers;

(2) men who will have to become foresters when the deputy rangers' class is abolished. At present there is considerable difficulty in recruiting men of the first description, as forest life is not congenial to them and they are frightened of work on the Javadis, Pachamalais and other hills.

188. *Protective staff.*—The conduct of the protective staff shows little sign of improvement. There were 151 dismissals or removals, 110 suspensions and 17 reductions. Tinnevelly, however, is exceptional in this respect and in Madura one guard retired on a pension. Fortunately the number of watchers employed is gradually diminishing.

189. *Ministerial establishment.*—The ministerial establishment is reported to be satisfactory.

190. *Health of establishment.*—There has been a great deal of sickness amongst rangers and one who was working in the Pachamalais and Kollimalais broke down, whilst another got seriously ill and died after the close of the year. The Javadis are responsible for a great deal of ill-health in South Vellore and the more work is concentrated in these malarious tracts, the more subordinates are likely to suffer until they have been properly housed and supplied with wholesome drinking water.

191. *Casualties.*—One guard and two watchers belonging to the Perambalur range of Trichinopoly died and one watcher in Madura.

192. *Relations between Revenue and Forest officers.*—Continued to be cordial.

193. *Service books* were maintained and verified in all districts.

194. *Conservator's inspections.*—The Conservator toured for 204 days during the year. All the districts except Madura and Tinnevelly were visited and the offices of these districts inspected. Inspection notes were written for South Salem, Trichinopoly and South Arcot and for the Amerdi plantation in North Vellore.

195. *Touring of District Forest Officers.*—The touring of District Forest Officers was satisfactory. In Trichinopoly and Madura touring was short owing to ill-health of the District Forest Officers concerned.

196. *Forest Commissioner's Tours.*—The Forest Commissioner toured in South Vellore and South Arcot districts.

197. *Inspection of Range offices and sale depots.*—All the range offices in the circle except one in Tinnevelly were inspected. The two sandalwood sale depots were also inspected during the year.

198. *Audit of accounts of District Forest offices.*—All districts were inspected and the accounts were declared to be satisfactory.

199. *Imperial Forest College, Dehra Dun.*—One probationer for the Provincial Forest Service was deputed to the College.

200. *Madras Forest College, Coimbatore.*—Two rangers and three deputy rangers obtained higher standard certificates. Out of the five deputy rangers deputed for the 1915–17 course, one was sent down being unable to follow the course. Two rangers and four deputy rangers have been deputed for the 1916–18 course.

201. *Vernacular Training School.*—The session of the Vernacular Training School was held in the North Salem division under the charge of Instructor, Ranger Belliappa. The course was for students from the Salem and North Arcot districts and instruction in sandal work was made a speciality.

The results were not altogether satisfactory as it was only found possible to select 26 instead of the usual 30 for deputation.

Out of 26, two had to be sent back on account of ill-health and four deserted so that only 20 passed through the full course.

*Western Circle*

202. The chief feature of the year was that the Collector was relieved of purely departmental work and that the District Forest Officer was placed in a position to enable him to express his own opinion on forest matters.

Mr. C. D. McCarthy held charge of the circle up to 12th April 1916 when he proceeded on combined leave and was relieved by Mr. H. A. Latham.

203. *District charge.*—The division of the *South Canara* district into two forest charges designated *Mangalore North* and *Mangalore South* was brought into effect from 16th May 1916.

204. *Range charge.*—There were no changes during the year.

205. *Establishment.*—The clerks and menials for the office of the new *Mangalore* division and the establishment required in connection with the working of the Timber Transit Rules in *South Malabar* were sanctioned.

*Work and Services.*

206. *Superior officers.*—Collectors seem satisfied on the whole with the work of their District Forest Officers. With one or two exceptions all the superior officers (Imperial and Provincial) have worked well; in the case of some of the younger ones there is a tendency to strain at what is considered red tape. For special commendation I would mention the work of Mr. Wood for improving the timber extraction, Mr. Richmond for pushing on his fuel sales and demarcation and Mr. Bourne for work in connection with the Nilambur teak plantations in and out of office.

207. *Executive establishment.*—The work of Rangers with a few exceptions, has generally been favourably reported on. Rangers A. R. Narasimha Ayyangar, C. Sankunni and A. Nicholas are mentioned specially for good work. The Ranger whose prosecution was referred to in the last year's report was acquitted, but was punished departmentally. One Ranger was reduced to Deputy Ranger, two were suspended and reduced after the close of the year. The work of Deputy Rangers was on the whole fairly satisfactory. The services of one were dispensed with and the probation of 14 was terminated.

208. *Protective staff.*—The work of the establishment with the exception of a few Foresters continued to be far from satisfactory. *Punishments reported are—Foresters.*—The services of two were dispensed with, two were reduced and three were suspended. *Guards.*—Dismissals 14, removals from service 22, suspensions 36 and reductions 7.

209. *Ministerial establishment.*—The work of the staff in the Divisional offices was fairly satisfactory. The head clerks of the *Nilgiris* and *South Coimbatore* are commended for good work. The work of the range establishments has been fair except in one of the offices in *Mangalore South* where it was bad. *Punishments.*—The services of one range clerk in each of *North Malabar, Central Coimbatore* and *South Coimbatore* were dispensed with; one in *Kollegal* was suspended and one was reduced in *Central Coimbatore.* The staff in the Circle Office have worked well under the Manager, M.R.Ry. T. Ramanuja Ayyangar, a man with much experience.

210. *Health of the establishment and casualties.*—The general health of the establishment was fair in *Kollegal*, *North Coimbatore*, and *South Canara*, except at the foot of the ghats in the last, and bad as usual everywhere else except on the *Nilgiri* plateau. Two Foresters, two guards and one watcher died during the year. Several of the subordinates were granted sick leave. One Ranger retired on completion of service and one guard was invalided.

211. *Relations between Revenue and Forest officers.*—In *Kollegal* there was a good deal of friction early in the year which disappeared with the transfer of the then District Forest Officer, M.R.Ry. P. Venkataramanan; otherwise relations continued to be cordial. All Range Officers in *South Canara* and *Kollegal* and one Range Officer in *South Coimbatore* attended the jamabandi. The District Forest Officer, *Central Coimbatore*, halted with one of the Revenue Divisional Officers at his jamabandi camp and both officers instructed the members of some of the panchayats about the management of the forests handed over to their control. Such attendance in *Malabar* was, as usual, not required and was not carried out in *North Coimbatore*; the non-attendance in the latter division has not been explained. The officers in the *Nilgiris* were in constant touch with each other. No matters of importance cropped up at any of the jamabandis.

212. *Service books.*—These are reported to have been maintained in all districts and verified up to 31st March 1916 except in the *Nilgiris* where they were verified up to 31st December 1915.

213. *Tours of the Forest Member.*—The Hon'ble Mr. H. F. W. Gillman toured in the divisions of *Mangalore South*, *North Malabar*, the *Nilgiris* and *South Coimbatore*. The forests of *Mangalore South* from which overmature timber is extracted, the demarcation work in the forests of the *Nilgiris*, the new district boundary between the *Nilgiris* and *Coimbatore* and the estates on the Anamalais were inspected by him.

214. *Conservator's inspection.*—Some of the forests of *Mangalore South*, *North Malabar*, the *Nilgiris*, *Central* and *South Coimbatore*, the teak plantations in *South Malabar* and all District Forest offices were inspected. All the offices were found to be generally in fair order. The number of days spent in camp was 137. The short touring so far as the writer of the report is concerned, was due to the fact that three District Forest offices at headquarters had to be inspected during the period he held charge and that he had to be present for the examinations in connection with the Forest College. His predecessor was unwell.

215. *Touring of District Forest Officers.*—All the District Forest Officers except *South Canara* and *South Malabar* spent in camp more than the minimum period of touring prescribed. The short touring in *South Canara* is ascribed to the poor health of M.R.Ry. V. Raman Menon and to Mr. Longrigg's stay at headquarters for 15 days in connection with the division of the district and in *South Malabar* it was due chiefly to the fact that the District Forest Officer had to spend 82 days in collecting data for the preparation of a revised working plan for and in thinning the teak plantations within the five-mile radius of his headquarters.

216. *Inspection of Range offices.*—All range offices except one in *Central* and two in *South Coimbatore* were inspected. The results are reported to be generally satisfactory with five exceptions. With the exception of the Coondapur sale depot in *South Canara*, all depots were inspected.

217. *Audit of accounts of District Forest Offices.*—The accounts of all the offices except *South Malabar* and *North Coimbatore* were audited by the Local Fund Audit establishment. The Assistant Accountant-General inspected also the accounts of the *Kollegal* office. The results are reported to be satisfactory.

218. *The Madras Forest College, Coimbatore.*—Three Rangers and one Deputy Ranger passed the course taking the higher standard certificate. One probationary Ranger failed and his probation was terminated. Two probationary Rangers and three Deputy Rangers were deputed for training for the 1915–17 course; one of the Deputy Rangers was sent back for incapacity at the end of the first year's course.

219. *The Imperial Forest Research Institute and College.*—One probationer for the Provincial service was deputed to the College after having undergone preliminary training in *North Coimbatore*.

220. *The Vernacular Training School.*—Of the 28 students remaining at the close of the last session held in *Central Coimbatore*, seven secured first class and twenty-one second class certificates. This year's session was held in *North Coimbatore* and subordinates from the four divisions of *Coimbatore* and the *Nilgiris* were deputed for training. The strength of the school at its start was 28 of whom one died of pneumonia. Several of the men sent seemed physically unfit for the work they had to do.

## CHAPTER V.—GENERAL.

### (*a*) Rules under the Forest Act.

*Northern Circle.*

221. *Timber transit rules.*—(i) The rules are reported to have worked satisfactorily in all divisions. The District Forest Officer, *Gōdāvari Lower*, suggests that private forests in the division adjoining Government forests may be notified by the Collector under rule 4 of the model Timber Transit Rules (framed under sections 35 and 36 of the Madras Forest Act) to prevent illicit removals from Government forests under cover of permits issued by private persons.

(ii) *Rules under section* 26 *of the Forest Act.*—The privileges allowed by these rules were generally utilised and no complaints or abuses were brought to notice except from *Kurnool West*, where a good deal of timber was smuggled from the unreserves in the Yerramalais. It is hoped that the introduction of the revised Timber Transit Rules will remedy matters.

(iii) *Rules framed for the collection and disposal of driftwood.*—The revised rules have been sanctioned and brought into force during the year in *Gōdāvari Lower* and *Upper* and *Kistna*. The lease system has again been introduced in the *Lower Gōdāvari* division.

(iv) *Rules for the guidance of Forest Officers in compounding forest offences.*—These rules worked smoothly and well in all divisions.

(v) *Rules framed under the Forest Act for private forests*—were worked satisfactorily. The Salur estate has not made much use of the rules for constituting reserves, proposals for only one block as yet having been received. In Jeypore (Malkanagiri range) it would appear that conservancy lines have not answered their purpose.

The management of the Madgole forests by the Court of Wards produced very satisfactory results. Provisions under section 26 of the Forest Act were extended to this estate.

The Kurupam estate proposed a number of reserves, only one of which has so far been sanctioned. In *Kistna*, rules under sections 26 and 32 of the Forest Act were sanctioned for the management of forests and waste lands in the Vuyyuru estate.

### (*b*) Supply of forest produce to meet the wants of the people.

222. (i) Coupes in convenient localities for the supply of fuel, timber and bamboos were generally sold to the contractors to meet the wants of the people. With the District Forest Officer, *Kurnool West*, I met representative inhabitants of Nandyal in October 1915. They represented that the selling of coupes to contractors resulted in rings being formed, but they were not prepared to go to the coupes themselves where daily retail sales were also being held. In *Gōdāvari Lower* the permit system was restricted to Rampa and unreserves under the control of the Forest Department. In *Kurnool East* agricultural implements were collected departmentally by Chenchus and sold to the public. In *Kurnool South* the exploitation of coupes was as far as possible confided to local agency so that the wants of the people may be met first. In order that the average ryot may be induced to enter into competition, lines in small sections were put up for auction and purchased locally. In *Kurnool West* the question of the supply of agricultural implements and small timber generally has been under consideration and proposals for making the supply on partly prepaid indents have been submitted to the Board. Timber and fuel felled *departmentally* is sold in monthly auctions at the edge of the coupe, a sufficient reserve of material being kept for sale in retail.

223. *Free removal of grass.*—This was permitted in *Vizagapatam*, *Gōdāvari Lower*, *Kistna* and the *three Kurnools*, and was freely availed of by ryots except in *Kurnool West*. No instance of abuse was brought to light. In *Kurnool South*, the village of Bachapalli was excluded from this concession as a penalty for having failed to render help in putting out fires. I hope in future to encourage further the free removal of grass by cart-loads in return for successful protection.

224. *Hill tribes.*—In *Ganjām* the assistance practically of all Khonds living adjacent to or inside the reserves was enlisted in fire and general protection of the forests. They received concessions in the way of dry fuel, grass, unclassified timber for repairing houses and minor forest produce for the assistance they had rendered. Some Khonds whose lands had lapsed into the hands of money-lenders were granted banjar lands after the tree growth above 2 feet in girth standing thereon had been auctioned. In *Vizagapatam* the hill people had no complaints against the working of the Forest laws and the privileges given to them were in no way abused. In Downur mutta, however, some villagers showed indifference in putting out a big fire in Dharakonda Reserve. The matter was enquired into and a warning was issued. In *Gōdāvari Upper*, the Koyas and Reddis did good work in clearing fire lines and in the protection of forests from fire. Special rewards for successful fire protection were distributed during the year. It is reported that both Koyas and Reddis showed an inclination to remove themselves from the division when pressed to do work on the roads now under construction, despite the fact that they admit that they are properly paid There was, however, very little if any actual emigration as the road works were stopped to effect economy on account of the war. The District Forest Officer considers that this tendency of hill men must be kept constantly in mind with regard to the future working of the division, as extensive emigrations of the already scanty population would be a lamentable contingency to be avoided at all cost if the forests are to be protected from fire. In *Gōdāvari Lower*, the Koyas and Reddis in the Polavarm and Yellavaram Divisions were employed in fire and general protection of the forests and in road and building works. They evinced considerable interest in forest matters as they were not only liberally rewarded but were allowed several concessions in return for their services. In *Kurnool East*, the conduct of the Chenchus was on the whole satisfactory. They were employed on various forest works such as collection of minor forest produce, line cutting, fire protection, preparation of agricultural implements, spokes and felloes, fashioning timber, preparing bamboo splits, collecting tangedu bark, construction of foot-paths and bridle paths and bunding up of streams. The District Forest Officer considers that in future the Chenchus will do any forest work which the ordinary village labourers without any technical skill can perform. The payment made to the Chenchus during the year for different kinds of work detailed above amounted to Rs. 19,651. In addition to it 112 men were engaged as fire-patrols, six as bungalow watchers and five as reserve watchers and the amount earned by them as wages amounted to Rs. 5,212. Thus the total amount paid to Chenchus on account of works and wages was Rs. 24,863. From this the District Forest Officer concludes "it will be apparent that the great majority of the Chenchus could not have found time to disturb the public peace and hence it is only natural to suppose that crimes must have appreciably diminished." Collector's remarks: "The sum shown as spent in payments to Chenchus is considerable, practically quarter of a lakh. As no particulars of the number of hands employed or the period of employment are given in the report, it is not possible to judge of the value of their labour or to institute a comparison from the point of view of economy, of the advantage or disadvantage of employing them rather than other class of labourers. In view of the alleged "pampering" of the Chenchus by the department it would be well to go into these matters more fully in the report. On the whole Mr. Madan has made very creditable efforts to keep his Chenchus employed, though it is doubtful whether he is not too sanguine in inferring that an appreciable decrease of crime has resulted. It may be possible to take further steps in the direction of settling the Chenchus on the land, providing plough bullocks, etc., without waiting for the final orders of Government on recommendations in Mr. Hood's report." I am entirely in accord with the Collector's views. In *Kurnool South*, the Chenchus at Ahobilam were employed on fire protection works and cultural operations. All the able-bodied men at Ahobilam, Baireni, Mahanandy and Isukagundam were as usual

employed as fire-patrols. In *Kurnool West*, the Chenchus were employed in the plantations in other works such as felling work, rough road-making and bunding hill streams. It is expected that plantation work will come to an end in 1916-17 as further development is restricted by scarcity of water, and it is necessary therefore to find them some other occupation. The District Forest Officer states that the Chenchus seem to prefer bunding work to other employment provided that the work spot is not too far from their gudems. I am therefore sanctioning funds for this purpose as far as the present financial situation will permit. The District Forest Officer considers that lac cultivation will be still more attractive besides being directly remunerative. As the District Forest Officer points out there is little doubt that field cultivation is the only real means of settling them and provided that this can be established without undue sacrifice of the forest, it is the object to be aimed at. Mr. Clear also says "It is proposed to grant future rewards to Chenchus for regular work throughout the year, which will include helping to put out fires. It is thought that this system will tend to discourage wilful incendiarism, as failure to turn out to extinguish fires will involve forfeiture of rewards otherwise earned by regular work. As matters stand at present the promise of rewards for fire protection alone is not sufficient to induce Chenchus to desist from their customary firing." I agree with this view. The District Forest Officer further reports that "it has been a long-established custom for the Chenchus of Nagaluti, Pecheruvu and Sriselam to collect metta fees from pilgrims attending the Sivaratri and Ugathi festivals at Sriselam in exchange for certain imaginary services performed. This year the collection was prohibited by the Police on the ground that it was blackmail. The direct result has been a recrudescence of dacoities and other crimes and Chenchus affected are now more out of hand than they have been for several years. This precipitate action is much to be regretted. Had the matter been carefully considered after attendance at the festival by responsible officers and fully discussed with the leading Chenchus there is little doubt that a satisfactory arrangement by which the practice should be discontinued from next year onwards could have been arrived at. The position is much worse now than it was before the festival and it will be a matter of considerable difficulty to regain the confidence of the Chenchus concerned." On this the Collector remarks: "The Chenchu question is pressing. The appointment of a special officer proposed by Mr. Vernon is most desirable. No orders have yet been received from Government. The attempt to stop the mettas was made without consulting me and was ill-advised. It has led to reprisals on the part of the Chenchus, particularly on the West. Mr. Clear's suggestion is sound; but the payments to the Chenchus should be made conditional not only on their doing good forest work, but on their general good behaviour refraining from crime. In the East division they have done a good deal of work for the department in splitting bamboos, etc. It does not appear whether anything of this sort has been devised in the West. It is suggested that, without waiting for orders on Mr. Hood's report as a whole, steps be taken to start them on agriculture. Another matter which should be taken up is the widening and straightening of the pilgrims path from Nagaluti. The Chenchu schools on the present lines are useless."

225. *Cultivation in reserved forests.*—In *Vizagapatam* an area of 57·50 acres in Chintapalli reserve continued to be under cultivation. This reserve was, however, handed over to the control of the Agency Revenue Department. In *Kurnool East* in addition to the land granted to the Chenchus in previous years, 5 acres were granted to a Sugali of Murikimallapenta during the year on the condition that he should help the Chenchus of that gudem with bullocks whenever required for ploughing their lands. The Chenchus of only three gudems had actually cultivated the lands granted to them Great difficulty is felt by them in obtaining good ploughing bullocks. In *Kurnool South*, the 4 acres of land granted last year to the Police metta talaiyaris at Payalakanama were not cultivated. Twenty acres of land were assigned to the settlement of cartmen near Chelama in order to induce them to continue in the settlement since it enhances the value of all coupes in the locality besides affording convenience in the procuring of carts locally for touring or other purposes. In *Kurnool West* the lease of the two plots of land in the Gadidamadugu reserve to the Christians of that place was renewed. I should like to see all Forest Guards and Watchers, who live in the forests, provided with land to cultivate. It

would give them a stake in the beat and would render a transfer doubly penal. There are obvious and inherent difficulties, but the District Forest Officer, *Kurnool South*, has undertaken to make an attempt at Chelama.

226. *Mining and prospecting.*—A certain quantity of graphite was collected from the old Pedakonda graphite mines in *Upper Gōdāvari* and sent to the Director of Industries at his request. In *Kurnool South* the license for prospecting for diamonds in the Ramavaram reserve still continued unworked and the period of lease also terminated in December 1915. As the licensee attributed to the war his inability to start work, the Collector addressed the Board to extend the lease. In *Kurnool West* Messrs. Ghose and Wellar were allowed to remove small quantities of barytes from Yerramalais for experimental purposes.

227. *Realization of revenue from the usufruct of toddy-yielding trees on Government waste and poramboke lands.*—The total revenue realized was Rs. 40,019 against Rs. 31,950 in the previous year.

### (*c*) Live and Dead Stock.

228. *Live-stock*—(*a*) *Elephants.*—All the elephants in the circle except one in *Ganjām* continued to keep fairly good health. But their condition is poor when compared with that of the Western Circle elephants engaged on hard and remunerative work. The feeding has been extravagant but a change of diet is now being tried in *Ganjām*, and I hope to introduce this into other divisions also. The local conditions of the Northern Circle render almost impossible the adequate control of the elephants by the District Forest Officer. The Board sanctioned the sale of a sick elephant in *Ganjām*; but no purchaser has yet been found.

(*b*) *Bullocks and buffaloes.*—In *Kurnool East* one buffalo was purchased for Rs. 20 to carry water for the Chenchus of Chintala gudem during summer. In *Kurnool South* there were ten bullocks at the commencement of the year, of which three were sold and one died, and in *Kurnool West* ten pairs of bullocks were maintained. The bullocks in *Kurnool South* were let on hire to contractors and officials.

*Inventory of valuable stock.*—Stock registers were maintained and verified in all the divisions. The hay press in the Direction office was transferred to the Southern Circle, Bombay.

*Rain gauges.*—Rain gauges were maintained and readings recorded in all divisions. In *Kurnool South* two new stations at Sandrapodu and Chintalapalli were opened. A station is required at the Tunnel bungalow, *Kurnool South*.

### (*d*) Suits.

229. In *Gōdāvari Upper* the notice of a suit given by a late contractor in the previous year was settled by compromise. Large issues were involved and the investigation resulted in the unearthing of somewhat unsavoury past history. The appeal in the Privy Council against the settlement of the Coringa Extension in *Gōdāvari Lower* has since been decided in favour of Government.

230. *Classification of forests.*—The classification of reserved forests in all divisions except *Kurnool East* and *South* was completed.

231. *Panchayat system.*—In *Kistna* division five reserves were placed under panchayat management. The working of three reserves is reported to be satisfactory and of the remaining two unsatisfactory. Proposals for the formation of a panchayat in *Gōdāvari Lower* are pending with the Board. In *Kurnool East* proposals for forming a panchayat are pending inspection of the locality by the Collector and the Conservator. In *Ganjām* proposals for two panchayats were pending with the District Forest Officer. But it is proposed now to transfer these two areas to village forests The District Forest Officer, *Vizagapatam*, has been requested to consider the advisability of starting panchayats in the Sarvasiddhi range. Special attention will in the present year be paid to the further development of the panchayat system.

232. *Improvement of water-supply and grazing facilities in Government grazing grounds.*—In *Gōdāvari Lower* two tanks were improved and a well which was commenced last year was completed; in *Kistna* one kunta in one of the reserves under panchayat management was repaired; in *Kurnool East* two kuntas and two wells were improved; besides these considerable number of forest springs were cleared and

deepened; in *Kurnool South* two kuntas were repaired; in *Kurnool West* no works were undertaken on account of the war. In the remaining divisions no special measures in this direction are considered necessary at present.

233. *Opening small fuel coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—Coupes sold to contractors, private forests and unreserved lands meet the wants of the people who live near forests. But in distant towns the price of fuel is undoubtedly high as compared with that of a few years ago when it was sold at far below the market value. The problem would solve itself if Municipalities could be induced to raise plantations of casuarina, etc. Nor am I convinced that the prices are very much above what they should be considering the present average value of fuel in the Presidency and the great rise in the price of the agriculturist's crops. I have lately attended conferences in the *Kurnool* district to deal with this question, of which the solution seems now more hopeful.

234. *Patrol system.*—The system has been introduced in all divisions except *Upper Gōdāvari* and its working is reported to be satisfactory in *Kurnool East* and *South*. The *sine qua non* of the system is undoubtedly the *confidential* issue of orders to the patrol every week. This condition had not been complied within more than one division last year. Besides the patrol at least one guard is also required for each area to form a nucleus of assistance, information and supplies.

*Central Circle.*

235. *Realizations of revenue from the usufruct of toddy-yielding trees on Government wastes and poramboke lands.*—Rupees 74,589 was realized against Rs. 51,407 of last year. The increase was due to increase in the rates in *Anantapur*, *Guntūr*, *Nellore* and *Chittoor* districts.

236. *Measures adopted to encourage the growth of manure leaf-yielding trees and shrubs.*—No measures were adopted during the year, as such operations had been ordered to be discontinued.

237. *Timber Transit rules.*—The rules which are in force in all districts except *Bellary*, *Anantapur*, *Nellore* and *Chingleput* are reported to have worked satisfactorily. The introduction of Transit rules into the last named four districts is, the Conservator considers, desirable. Without them no efficient check of major forest produce is possible with the establishment at command.

238. *Rules under section* 26 *of the Forest Act*—have worked satisfactorily and there was no complaint or abuse brought to light.

239. *Inventory of valuable stock.*—The stock registers are reported to have been maintained and verified in all districts.

240. *Rain gauges*—were maintained in all districts except *Anantapur*, *East Cuddapah* and *Chittoor*.

241. *Cultivation in reserved forests with a view to afforestation.*—No new reserves were leased out in *Bellary*. The result of sowing of seeds in Adōni range is reported to be fairly satisfactory. Portions of Badanahal reserve were re-sown during the year but the operation was a failure. In *West Cuddapah* several plots were assigned to the Police ghat talaiyaris for cultivation.

242. *Specimens.*—Two maunds and 34 seers of red sander pieces from *Cuddapah East* were sent to the Director of Industries, United Provinces, Cawnpore, for experimental purposes in connection with the extraction of "santalin" dye, and his report is awaited.

243. *Suits.*—A suit against a tangedu bark contractor for the recovery of lease amount in *Anantapur* and a suit against shrotriemdar of Musalreddipalle agraharam in *East Cuddapah* district are pending in the courts.

244. *Live-stock.*—Out of the four buffaloes in *Chittoor* district, one died during the year and two are reported to be very old and past work.

245. *Mining.*—In *Bellary*, the mining lease granted to Mr. A. Ghouse of Dhone for 30 years continued to be in force. Mr. A. D. Sanders, Agent, General Sandur Mining Company, for prospecting iron and manganese ore was granted a license to prospect it in survey Nos. 18 and 14 of Tonasigeri reserved forest of Kudligi taluk. An application from Messrs. A. M. Jeevanjee & Co. of Bombay for a prospecting license to prospect mica and other minerals in Bellekal reserve, Hospet range, was

recorded as the applicant failed to furnish certain information called for. In *Anantapur* no new licenses for prospecting gold were given; no operation was in progress in *Guntūr* district.

### Nellore Mica and Mica Mines.

*Applications.*—Thirty-three applications were pending disposal at the beginning of the year. Forty-two applications were received during the year making a total of 75. Of this 51 were disposed of and 24 were pending at the close of the year.

*Mines in Government lands (State mines).*—There were 53 mining leases in force at the beginning of the year including the lease of Samarskite and the nine cancelled mines of Mr. A. Subba Nayudu now left in charge of the Official Receiver appointed by the court. Six leases were relinquished during the year. One new lease was sanctioned during the year. Thus the number of leases in force at the end of the year excluding the nine cancelled leases of Mr. A. Subba Nayudu, was 39.

*Prospecting licenses.*—Twenty-eight licenses were in force during the year for varying periods.

*Patta land mines (shared mines).*—The year opened with 27 agreements in force of which five were relinquished and one new lease was granted. The number at the end of the year was 23. The "Shah" and "Pallimitta" mines of Messrs. Hajee Muhammad Badsha Sahib & Co., the "Lakshminarayana" and "Sri Krishna" mines of Messrs. F. F. Christian & Co., the "Pattabhirama" of Y. Audamma, the "Bhupathi" mine of Mr. Y. Subrahmanyam, the "Kubera" patta land mine of Mr. Vissa Lakshminarasayya, "Seetharama" of Turimerla of the Sankara Mining Syndicate, continued to work steadily. The "E" and "F" mines of Talupur, the "Palameni" mine at Chaganam and the "Tallabodu" mine under the management of the Official Receiver reported to have produced good results.

*Mines in permanently-settled estates (private mines).*—There were 23 mines in the shrotriem and zamindari land yielding 82,542 lb. of mica valued at Rs. 68,294. Oorupalli, Chukka and Tammamani mines are the best.

*Illicit mining.*—No cases during the year under report.

*Outturn and royalty.*—There has been rise in the yield of mica during the year as detailed in the margin which is due to the perceptible revival of the mica industry during the year. No other mineral was worked.

| Years. | Quantity. LB. | OZ. | Royalty. RS. |
|---|---|---|---|
| 1914–15 ... | 331,568 | 3 | 14,847 |
| 1915–16 ... | 505,037 | 3 | 15,985 |

*Financial results.*—The revenue realized was Rs. 21,468 against Rs. 19,122 of previous year and the expenditure Rs. 6,042 against Rs. 6,617. The increase under revenue is due to increased outturn of mica.

*Labour.*—One thousand eight hundred and seventy-nine persons were employed in mining against 2,974 of previous year. Wages were the same as in last year with a slight increase towards the latter part of the year.

*Accidents.*—There was only one accident at the "F" mine in which one man was seriously injured.

*Ventilation and lighting in tunnels.*—No change.

*Inspection by superior officers.*—The Inspector of mines did not inspect any of the mines. The District Forest Officer inspected three, Revenue Divisional Officer, Kāvali, three, and District Medical and Sanitary Officer, four.

*Prospect of industry.*—Almost all the old mines continue to yield a steady supply. The high value of the mica market is now inducing miners and merchants to direct their attention to the enterprise and it is hoped that favourable results will come. Several applications have been received for new plots and the mica industry has perceptibly improved especially during the latter part of the year.

### Recommendations of the Forest Committee.

#### (*a*) *Classification of forests.*

246. The classification of the forests is complete in all districts. But some changes occurred in *Chingleput* district classification. Classification of certain reserves in Palmaner and Madanapalle of *Chittoor* district requires revision and proposals will be submitted by the District Forest Officer in due course. It is also possible that in some other districts classification will need further revision.

(*b*) *Constitution of forest panchayats.*

247. During the year four panchayats were formed in *Anantapur*, 15 in *Guntūr*, 13 in *West Cuddapah* and 19 in *Chittoor* district.

About half the panchayats are reported to be working satisfactorily. Three in *Anantapur*, five in *West Cuddapah*, one in *Nellore*, three in *Chingleput* and fourteen in *Chittoor*, the working was not satisfactory. Three panchayats were dissolved on account of mismanagement in *Chingleput* district. It is reported that in *Guntūr* district with regard to some of the reserves for which assessment was fixed in Board's Proceedings Forest No. 14, dated 21st January 1916, it was found impracticable to form panchayats. Several panchayats formed in *Bellary* district were sanctioned by Board after the close of the year. The manner in which panchayats have been formed in *Bellary* district has been specially reported to the Board and in the Conservator's opinion leaves much to be desired. In paragraph 49 of the Forest Committee's report certain advice was given as to the manner in which classification of reserves should be undertaken and the following sentences close that paragraph :—

"It is observed that this classification will have to be made with great care and with full consideration of all the circumstances. Great common sense will be necessary on the part of the officers and they will have to be on their guard against an excessively professional point of view on the one hand and any tendency to excessive laxity on the other."

The Conservator considers that in some instances, owing to classification having been made too hurriedly and without due consideration on the lines recommended by the Forest Committee, the classification is not altogether satisfactory and some revisions will be necessary.

Again in paragraph 10 of Order No. 3020, Revenue, dated 13th October 1913, the Government stated as follows :—

"In many villages it would probably be difficult to find cattle owners possessed of the requisite qualifications in sufficient numbers to form a panchayat, while there would be no substitutes in case of their supersession. It would be a grave misfortune if after trial any considerable proportion of forest panchayats were found unequal to the duties assigned to them. Such a result would shake the hope that a means of relief from some unsatisfactory features of forest administration had been devised."

And in paragraph 11 of the same Government order it was stated "while therefore Government accept the Committee's proposals that an experiment should be made in the constitution of forest panchayats they consider that very great care will be necessary in selecting the villages for experiment. The Revenue Divisional Officer and the Forest Officer who are entrusted with the duty of classifying the forests should be required to examine the conditions prevailing in each forest village with special regard to their adaptability to panchayat administration." With the advice given above it is impossible to take any exception, but unfortunately in many instances it has not been followed either in the matter of classification or in the formation of Panchayats. The result is, in the Conservator's opinion, that many of the Panchayats which have been formed are doomed to almost certain failure from the very beginning. In some districts the mere fact that Reserves have been classified under Class V has "ipso facto" been deemed sufficient justification to enforce them under Panchayat management, and this, it is submitted, was not the intention of the Forest Committee and still less was it that of the Government. It is only in the hope that this dangerous course may be held up and that panchayat management may yet be given a reasonable and fair trial that the Conservator desires to bring this matter prominently to the notice of the Board and Government.

Turning now to a more pleasant branch of the subject the Conservator desires also to place prominently forward the progress which has been made in the Nellore district in the introduction of the "Kancha" system of grazing. With regard to all the Forest Reserves of this district the "Kancha" system is now practically in force, and in many instances the Kanchadar undertakes the protection of our "closed" areas for us in addition to the areas he is allowed to graze a limited number of cattle in for certain months of the year. The Kanchadar is in fact very often an informal panchayat itself and so rapid has the progress made been, that during the current year Government has been pleased to sanction the employment of a special "Kancha"

officer of the grade of a Deputy Collector to tour in the Nellore district with a view of explaining fully to the people the advantages of the system and the innovations we are gradually grafting on to the system, and so far, as far as the Conservator is able to judge, the Kancha Special officer has been doing admirably useful work with excellent results. The Collector of Nellore in forwarding the District Forest Officer's Administration Report for the year writes as follows :—

" Forwarded.—The year is remarkable in the results achieved by the Kancha system of grazing. Revenue has gone up : forest subordinates have been withdrawn : there has been less friction ; offences have considerably declined ; informal panchayats are being formed. My best thanks are due to Mr. Arbuthnot for his sympathetic initiation and ceaseless watch over the system ; also to the Conservator for his ready sanction of all measures intended for the development of the policy. The system is being further developed in the current fasli.

I cannot however help noticing that the return to the public against the increased revenue is not adequate. I know the Conservator is keen on fences. Good fences are an absolute necessity for rendering the Kancha system workable. I think more attention should be paid to the putting up of good fences. "

The Conservator takes this opportunity of tendering his best thanks to the Collector of Nellore for his unfailing advice and assistance readily and freely given for the encouragement of the Kancha system in the district. He fully agrees with paragraph 2 of the Collector's endorsement, and more money should and will be spent on fencing the Kancha areas. Unfortunately the department is so put to it for establishment that it has been so far unable to spend more on this important work during the year but that is a situation which cannot last for ever and when the long overdue re-organization of the Department is sanctioned the work will be more vigorously taken up. Meanwhile we must do our best to push on with it as best we can. Now here in this Kancha system we have the germ of a system which will, if fostered carefully, spontaneously lead to the correct panchayat system. In other districts, it appears to the Conservator, panchayats are being forced on the people when neither they nor their conditions are ripe for them. Herein lies a danger that will ruin the prospects of the system unless more care is exercised than hitherto.

*(c) Opening of fuel coupes for rural supply.*

248. Coupes have been opened wherever there is local demand and they were sold to contractors for felling. The system is working well enough, but in some localities it needs more intelligent supervision than has been given.

*(d) The patrol system.*

249. The system is still in the experimental stage and is being given a trial in all districts except *Anantapur*, *Chittoor* and *Chingleput*. The work of the patrol parties in *Guntūr*, *West* and *East Cuddapah* is reported to be satisfactory.

*(e) Inducement to villagers to aid in forest conservancy.*

250. In addition to extending the " Kancha " system in *Nellore* referred to under (*b*), nothing more of any practical importance was done in the Circle during the year under report. In *Nellore* free removal of grass by ryots of certain adjoining villages of Rapur, Udayagiri and Kanigiri ranges was allowed for which they are to prevent fires spreading in the forests. In *West* and *East Cuddapah* the grazing fees for certain reserves have been raised for 1916-17 as the ryots of the adjoining villages refused to render help in putting out fires. This action is a regrettable necessity in such cases.

*(f) Improvement of water-supply and grazing facilities in Government grazing grounds (Board's Proceedings, Forest No. 125, dated 29th June 1914).*

251. In *Anantapur*, new wells were dug there in reserves and one existing well deepened. In *Guntūr* as usual the graziers were allowed to repair the existing kuntas. The existing wells in *West Cuddapah* and existing ponds in *East Cuddapah* and *Nellore* were repaired. In *Chingleput* concession was granted to the ryots of Tirumukkadu to enter Acharapakkam reserve and repair the tank for the cattle. Nothing was done in the remaining two districts.

*(g) Sale of plantations.*

252. In *Guntūr*, 4·94 acres in Kanuparti block II casuarina plantation was sold. In *East Cuddapah*, the growth in an area of 2,299 acres in Reddiapalli, Pullampet and Mittamedipalli plantations were sold. In *Nellore* an extent of 558 acres in Utukur and Varini plantations, was sold during the year. In *Chittoor* Bolampet tope of 18 acres was sold.

*Southern Circle.*

253. *Realization of Revenue from the usufruct of toddy-yielding trees.*—The revenue realised from this source shows an increase of Rs. 4,029 over the previous year, due to the enhancement of fees (B.P. Forest No. 164, dated 17th August 1914). The fixed fee system continued to be in force except in Tinnevelly and Madura. In South Salem the usufruct of trees not taken up under the fixed fee system was as usual leased out and a sum of Rs. 3,099 was realised against Rs. 3,276 in the previous year.

254. *Measures adopted to encourage the growth of manure-leaf yielding trees and shrubs.*—No operations for the growing of manure-leaf yielding species were undertaken by the department during the year. This is however a matter of great importance for the Forest Department in this Circle. In spite of large areas of unreserves in the Attūr taluk the forests of the Kalrayens, Pachamalais and Kollimalais are still being subjected to the depredations of manure-leaf cutters which is fatal to their use as conservation forests. Daincha has been established successfully in some villages in South Salem and the more this can be encouraged the better is the department served. In addition the *Tephrosia Purpurea*, one of the most valuable of the green manures, is found in large quantities in the dry fields at the base of the Pachamalais and Kollimalais. The department cannot afford to be apathetic in this matter and it is therefore a matter for regret that the reports from South Salem and Trichinopoly have practically nothing of any value as to the steps taken to bring this to the notice of the ryots. If such cultivation is improved and extended there is no doubt that the forests will be relieved of an enormous burden which they ought not to be compelled to bear.

In North Salem the manure-leaf farm at Giddagaranpatti (50 acres) was leased for Rs. 33.

255. *Grant of cowles for the formation of casuarina plantations in sandy areas* —Nil. The planting of casuarina on an extensive scale continues in the disafforested lands in South Arcot.

256. *Cultivation in reserved forests.*—Previous year's leases were renewed in South Vellore, North and South Salem and Trichinopoly. In Madura the lands on the Palnis continue to be cultivated under muchilikas with cardamom and in some cases coffee plantations.

257. *Improvement of water-supply in State forests.*—Considerable progress was made in *North Vellore*. Twenty old wells were improved at a cost of Rs. 609 and the Gillman Bhavi in Synagunta reserve completed for Rs. 63. The streams in five different reserves were bunded at a cost of Rs. 485.

In *South Vellore* the Director of Industries is carrying out boring operations with a view to the introduction of "Tube Wells." The introduction of these wells may go far towards the improvement of the drinking water-supply and in consequence the reduction of fever on the Javadis.

In *North Salem* tanks in the Jowlagiri and Thally grazing blocks were repaired, but in the case of five other tanks repairs could not be completed.

A water-trough was constructed in the Morappur reserve.

No progress in this matter was made in other districts and it is evident that this important matter deserves more attention.

258. *Supply of forest produce to meet the wants of the people.*—Under the contract system in force, contractors are bound by their agreements to supply the wants of the people at reasonable rates. The issue of permits at seigniorage rates for babul trees for agricultural implements was continued in Tinnevelly.

259. *Sale of fuel at the edge of forests.*—This was generally attended to by coupe contractors. The fuel felled departmentally in the Musiri range of Trichinopoly district was disposed of at the edge of the forest.

260. *Arrangements made for the transfer of sale depots to private agency.*—The contract system is universal and contractors have opened depots in almost all the important towns.

261. *Free removal of grass.*—This has been alluded to in paragraph 122 supra. The concession was as usual largely availed of in North Vellore. In South Vellore free removal was permitted from December to February.

262. *Hill tribes.*—As usual our dealings with the Malayalis in the Chitteris of South Salem and in the Javadis of North and South Vellore have been successful and they have given the department valuable assistance in fire protection as also the protection of sandal. It is a very satisfactory feature of the South Vellore administration that the District Forest Officer is able to report that on the Javadis goats have been sold off in hundreds and the Collector of the district is able to add his testimony as to the tactful treatment of the hill men by the District Forest Officer.

A great deal however still remains to be done as in South Salem the Malayalis of the Kalrayens, influenced by jaghirdars, have taken to smuggling sandal into South Arcot. In the Pachamalais and Kollimalais of South Salem and Trichinopoly very insufficient attention has been paid to this matter. Thousands of sandal trees have been destroyed by the pernicious system of ponnakad cultivation and although an occasional Malayali has been engaged as a guard or watcher no regular attempts have been made to win over the hill men to assist in protection. On the other hand the Malayalis have been prosecuted for ponnakad in no less than eighteen cases.

These hills have however recently been inspected by the Forest Commissioner and the Conservator and it is to be hoped that a more suitable method of dealing with the hill-man may shortly be instituted.

In Tinnevelly the attempt to make a Palayar settlement in Srīvilliputtūr range failed and the settlement was deserted. The Kani settlement near Kariar was not extended.

263. *Prospecting licenses.*—No license was granted during the year. In South Vellore Messrs. Gaudart & Co. of Pondicherry applied for a license for prospecting for minerals in the Ponniar reserve and the Collector has been addressed for the grant of a license. In South Salem Mr. H. W. Perry, Late Acting Deputy Traffic Manager, South Indian Railway, was granted permission to explore in the reserves of the district.

264. *Timber and sandalwood transit rules.*—The rules are reported to have worked satisfactorily during the year. In South Salem no property mark was registered, but three cases were charged for the infringement of the sandalwood transit rules. In Trichinopoly out of three applications for the registration of property marks one was registered, one is under enquiry and the third was rejected.

265. *Rules under sections* 26 *and* 32 *of the Forest Act.*—The rules continued to work satisfactorily and the privileges were generally availed of without any complaint. It is reported from North Salem that to a small extent there has been abuse of the concession in the cutting of classified trees.

The application of the Zamindar of Seitur, guardian to the minor Zamindar of Elumalai, referred to in the last year's report was disposed of by extending the rules under section 26 of the Act to the forest and waste lands in the Elumalai Zamindari.

266. *Control of unreserves by the Forest Department.*—The entire transfer of the Land Revenue administration of the Puliyur and Kambugudi enclosures on the Javadis in the Tiruppattūr taluk was proposed during the year and is pending final orders of Government.

267. *Rules regarding the levy of composition fees.*—The rules were attended to in fixing the composition fees.

268. *Arrangements made in holding the villagers adjacent to particular forests responsible for the protection of those forests by dividing the village and blocks of forests concerned.*—In South Vellore plans showing areas assigned to each Javadi hamlet for special protection by the Malayalis resident in those hamlets were prepared during the year for a considerable portion of the Javadis.

In regard to the rest of the district a notification was published towards the close of the year with the approval of the Collector defining the villages that will be held responsible for forest offences on any large scale, in definite areas of forests adjoining their villages. In other divisions little has been done in this direction.

### Live and Dead Stock.

269. *Inventory of valuable stock.*—Stock registers were maintained in all districts and verified at inspections. The total value of the dead stock in the Circle at the end of the year was Rs. 4,32,158.

270. *Rain gauges.*—Readings were recorded in all the rain gauge stations.

271. *Specimens.*—Toys, walking sticks, pencils and sandalwood specimens were sent from North and South Vellore and Trichinopoly to the Madras Park Fair Exhibition.

Madura sent a specimen of *Zizyphus Xylopyra* dye to the Director of Industries and three pine specimens to the Principal of the Engineering College to be tested. Some herbarium specimens were sent to the Gass Museum and to the Forest Botanist.

Specimens of sandalwood from South Vellore, North and South Salem were despatched to the Forest Chemist at Dehra Dun for determination of their oil value.

### Previous year's Suits.

272. *North Vellore.*—The boundary dispute in Gundalapalle reserve is still pending.

*South Arcot.*—The suit filed by a coupe contractor in the Tanjore district referred to in the last year's report was dismissed with costs.

*Trichinopoly.*—The appeal preferred by Arunachela Reddi to the High Court and the suit filed by the Kulitalai pattadar are still pending.

*Madura.*— The suit filed by a tank-bed contractor was decided against Government and an appeal preferred to the District Court.

*Tinnevelly.*—The Kuttalam water fall appeal is still pending in the Privy Council.

### New Suits.

273. *South Salem.*—The question of the ownership of the range of hills known as the Neivamalais and the adjoining hill and valley in the Salem and Attūr taluks is pending enquiry by the Revenue Divisional officer, Salem, who has been appointed as a survey officer for the adjudication of the claims of Government and the Mittadar of Sekkadipatti.

### Forest Committee's Report.

274. *Classification of reserves.*—The classification of reserves is practically complete in this circle. In South Arcot the Collector is considering the reclassification of some of the reserves and in South Salem the final classification was submitted shortly after the close of the year.

*Panchayat system.*—The progress in panchayats has not been very satisfactory. Many mistakes were made at the start such as handing over portions of a reserve to panchayats, failure to collect assessments and mistakes in the area handed over. These are by degrees being rectified. There has moreover been no keenness on the part of graziers to undertake management.

In addition to those of last year, panchayats for three reserves in South Arcot, one reserve in South Salem and six reserves in Trichinopoly have been formed.

The South Arcot panchayats are said to be run at a loss but an examination of their accounts shows that no trouble is taken to collect grazing fees.

*The patrol system.*—The system was continued in North Vellore, South Arcot and South Salem but it cannot be pronounced to be successful on account of the paucity of establishment.

275. *Realization of revenue from the usufruct of toddy-yielding trees, etc.*—Rupees 1,203 were realized in *South Canara* against Rs. 1,531 in the previous year. Some small amounts were realized in *Kollegal* and *Central Coimbatore*. The right to extract toddy from palmyras in the forests of one of the ranges in *South Coimbatore*, was leased out for three years at Rs. 60 per annum. There were no receipts in other districts. *Western Circle.*

276. *Measures adopted to encourage the growth of manure-leaf-yielding trees and shrubs.*—No action was taken in this direction nor was any required as the demand was met from other than reserved forests and lands.

277. *Supply of forest produce to meet the wants of the people.*—As in previous years the people in *South Canara* were allowed to remove grass free from reserved forests for thatching and fodder. This concession was not abused. Timber was also retailed from one of the depots. The private forests and unreserved lands supply the wants in *Malabar*. In the *Nilgiris* the issue of permits for small timber, fuel, bamboos, etc., was continued. The Badagas got their fuel at the usual nominal fee of Re. 1 a house for the year. The removal of brushwood at one anna per head load from the coupes under working was allowed. The attempt to sell firewood to the poor cheaper than the usual selling rate was abandoned as it was found that the fuel so purchased was being sold at the market-rate outside the depot. The departmental supply of fuel to the public at Ootacamund and Coonoor was further developed and a large quantity was disposed of. Firewood and charcoal were also sold in retail in depots. *Kollegal*—Contractors purchased fuel from the department and retailed in depots opened in Kollegal town ; the people elsewhere got their requirements from unreserved lands. In the other divisions of *Coimbatore* the supply of forest produce was left to contractors and there were no complaints. Small timber and agricultural implements were retailed from forest depots in the *North* division and brake poles were sold to the cartmen frequenting the ghat roads in the *North* and *South* divisions. The removal of brushwood in head loads from coupes under working was continued in the *Central* division.

278. (*a*) *The working of the forest panchayats.*—No new panchayat was approved during the year. The areas managed by panchayats are given below :—

| District. | Number of reserved forests managed by panchayats. | Area in acres. | Assessment imposed. | Number of panchayats managing the areas. |
|---|---|---|---|---|
| | | | Rs. | |
| Mangalore, North .. .. .. .. | 1 | 89·34 | .. | 1 |
| Central Coimbatore .. .. .. .. | 7 | 4,423·08 | 1,074 | 12 |
| South Coimbatore .. .. .. .. | 4 | 1,874·54 | 185 | 2 |
| Total .. | 12 | 6,386·96 | 1,259 | 15 |

Besides the above, some areas of unreserved lands (extent not reported) in *Mangalore, North*, and *North Coimbatore* were also under such management. In *Mangalore, North*, the panchayat discharged its functions satisfactorily and the forest has not in any way deteriorated. In *Central Coimbatore*, four of the reserves were overgrazed. Ten of the panchayats took an interest in their duties and carried out works of improvement, chiefly removal of prickly-pear and sowing grass seeds ; the defaulters were the panchayats in charge of the Arachalur and Tambikalayam reserves. In *South Coimbatore*, the members of the panchayat for Udiyur forest failed to realize their responsibilities and the management was unsatisfactory. The panchayat for the other four reserves carried out repairs to a cart-track and cleared prickly-pear from portions of two reserves. Regular accounts for receipts and expenditure were not maintained by the two panchayats. The management of the unreserved lands in *North Coimbatore* is well reported on.

(*b*) *Opening of small coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—There is no demand for such coupes as the demand is met from coupes sold to contractors and other sources.

(*c*) *Measures adopted for improving the water-supply in Government grazing grounds and the facilities for grazing and pasturage.*—No measures are necessary in the West Coast districts and in the *Nilgiris*. Nothing was done in *Kollegal* and *North*

*Coimbatore* for want of funds and in *South Coimbatore* pending settlement of the grazing question. In *Central Coimbatore*, the grazing grounds lie within easy reach of the villages and in the forests where cattle are penned there is no scarcity for water.

(*d*) *System of patrol by a gang of subordinates.*—The system was not introduced in any of the districts except *Central Coimbatore*, owing to the paucity of establishment. It was introduced in *Central Coimbatore* at the close of the year as a tentative measure.

279. *Grant of cowles for the formation of casuarina plantations in sandy areas.*—Nil. Sandy areas are scarce.

280. *Rules under the Forest Act*—(*a*) *Timber transit rules.*—The rules in *South Canara*, *North Malabar* and *Coimbatore* worked satisfactorily. The revised rules for *South Malabar* were sanctioned and introduced from 1st April 1916.

(*b*) *Rules under section* 26 *of the Forest Act.*—The rules worked satisfactorily and no abuse of the privileges was brought to notice. The area of unreserved lands under the control of the Forest Department was 489 acres in *North Malabar* and 863 acres in *South Malabar*. Two hundred and seventy-eight acres of tank-beds in *Central Coimbatore* were transferred to the control of the Revenue Department. The transfer of 733 acres in *South Malabar* to the same control was sanctioned, but was not effected before the close of the year.

(*c*) *Other rules.*—The sandalwood transit rules in *South Canara*, *Kollegal* and *North Coimbatore* and the shooting and fishing rules in the *Nilgiris* worked well.

281. *Hill tribes.*—In *South Canara*, the *Kudibis* supplied labour for the manufacture of catechu, fire protection, creeper cutting and improvement fellings. The *Kurichiyars* in *North Malabar* supplied labour for the department on a prescribed daily wage and some of them were granted 3 acres in the unreserved lands under the control of the department for ponam cultivation at an annual rent of Rs. 2-8-0 per acre. Certain *Mulcers* in *South Malabar* are employed as watchers and lands for cultivation is being given them. In the *Nilgiris*, the *Kurumbars* in the Mudumalai and Benne forests continued to work on fire protection and as elephant attendants. It is becoming increasingly difficult to secure their labour as work on private estates where both sexes earn wages is more attractive. Ten acres in Benne forest were allotted to certain *Kurumbars* for cultivation. A colony of *Irulars* in the southern slopes was evicted as they failed to supply labour for demarcating the new district boundary. The *Sholagars* in *Kollegal* and *North Coimbatore* continued to supply labour to the department on payment and were granted lands in reserves for cultivation free of rent; the extent leased out was 340 and 1,402 acres respectively. The hill tribes (*Irulars*) in *Central Coimbatore* were granted leases of lands in reserves for cultivation on condition of their supplying labour to the department and the extent so leased out was 852 acres. In *South Coimbatore*, it is reported that the co-operation of hill tribes in the matter of providing labour for departmental works and for collecting minor produce was maintained and that the existing free leases to hill men were continued.

282. *Cultivation in reserved forests.*—The following cultivations were allowed besides those referred to in the preceding paragraph. In *South Canara*, tenant-at-will leases covering 28 acres were granted on an annual rent of Rs. 20. In *North Malabar*, 312 acres were leased for kumeri and 424 acres of wet cultivations. Some of the wet cultivations were given on payment and some free of assessment. In *South Malabar*, the lease of 4 acres in the Old Amarampalam reserved forest for paddy cultivation was renewed for another year on the usual annual rent of Rs. 10. The lease of paddy fields covering 120 acres in the New Amarampalam reserve was renewed for five years from 1st April 1916 on an annual rent of Rs. 402 against Rs. 305 realized from the previous lease. The lease for coffee cultivation in *Kollegal* continued. In *North Coimbatore*, the grant of 169 acres in Gutialattur and North Bargur reserves for cultivation on payment of rent continued. The grant of 22 acres in Palamalai reserve was cancelled considering it inadvisable to allow cultivation after the acquisition of minor enclosures. Fresh leases covering 5,731 acres for coffee cultivation on the Anamalais in *South Coimbatore* were granted during the year.

The residential settlement on the Anamalais was named "Valparai town". About 70 acres in the area of the township (234 acres) have been cleared of growth and some of the public buildings are under construction. A telegraph office has been opened. Applications for sites in the township were pending disposal and a proposal to lease out the area within the settlement which is not immediately required for settlement purposes, for cultivation of plantation products was under consideration.

*Live and Dead Stock.*

283. (*a*) *Elephants.*—Anthrax broke out in the elephant camp in *South Canara* and two captures of the previous year died in the kraals. As the kraals were burnt to avoid further infection, the capturing operations had to be stopped during the year. There were 13 captures and three births during the year; one was exchanged with an elephant in Ganjām; 19 were sold for Rs. 44,135, one was shot owing to infirmity, one lost and nine died; the number remaining at the close of the year was 105. The condition of the elephants is reported to be generally good. The number of deaths included three calves of which one died of irregular feeding and another of convulsion and exhaustion and the third was undeveloped, three from anthrax and three from different ailments. The Superintendent, Civil Veterinary Department, inspected the elephants in the *Nilgiris* in May 1916, but has sent in no note.

(*b*) *Bullocks and buffaloes—Bullocks.*—Six were purchased during the year. The casualties of the year were—six were sold being unfit for forest work, five killed by tigers, three condemned and destroyed and one died of old age. The number that remained at the close of the year was 55. *Buffaloes.*—The stock is now 57, four animals having died and 23 having been purchased during the year.

(*c*) *Veterinary establishment.*—Mr. F. X. Mascarenhas inspected the live-stock in different districts and continued to do good work. The Assistant Veterinary Inspector was transferred to Coorg in September 1915 and another Veterinary Assistant was deputed in his place; his work lies in *South Coimbatore.*

(*d*) *Inventory of valuable stock.*—Stock registers are reported to have been maintained and verified at inspections. The value of the live-stock and stores at the close of the year was Rs. 3,44,650 and Rs. 3,80,719 respectively.

284. *Rain-gauges*—Maintained and readings recorded. Three new stations were opened in *North Coimbatore.* One of the gauges in *Central Coimbatore* got out of order and it took some months to replace a broken bottle during which time no readings were recorded. The readings in *South Canara* continued to be unreliable.

285. *Suits.*—The Tirumalpad of Nilambur appealed to the District Court of Coimbatore against the award passed for the acquisition of the Mudumalai and Kumbarakolli leased forests and the appeal was dismissed with costs. The lessee of private forests in the Attapadi valley has preferred a second appeal to the High Court in connection with a right of way through Tadagam reserved forest in *Central Coimbatore* and it has not been disposed of. The institution of a suit against a contractor in *South Coimbatore* for the recovery of Rs. 17,355 due by him for timber purchased was sanctioned.

F. L. C. COWLEY-BROWN,
*Conservator of Forests, Northern Circle.*

H. B. BRYANT,
*Conservator of Forests, Central Circle.*

P. M. LUSHINGTON,
*Conservator of Forests, Southern Circle.*

H. A. LATHAM,
*Conservator of Forests, Western Circle.*

# ADMINISTRATION REPORT OF THE MADRAS FOREST COLLEGE, COIMBATORE, FOR THE YEAR 1915-16.

## CHAPTER I.—CONSTITUTION.

### (1) *Staff.*

1. The office of Principal was held by Mr. F. L. C. Cowley-Brown from the beginning of the year up to the 11th September 1915 and thereafter by Mr. C. E. C. Fischer, Deputy Conservator of Forests.

2. Messrs. C. B. Dawson and H. C. Bennett, Deputy Conservators of Forests, filled the posts of senior and junior imperial instructors throughout the year.

3. M.R.Ry. K. R. Venkatramanan Avargal, Extra Assistant Conservator, remained the senior provincial instructor up to the 15th July when he proceeded on privilege leave and eventually reverted to district work, after three years of work at the college, which have met with the special recognition of the Principal under whose orders he served. He was replaced by Mr. E. M. Crothers, Extra Assistant Conservator.

Mr. J. Aranha, Probationary Extra Assistant Conservator, was the second provincial instructor up to the 19th October, when, on his transfer to the Nilgiris district, Mr. R. B. Cornwell, Extra Assistant Conservator, took up that post.

4. M.R.Ry. C. Srinivasa Rao, B.A., the Curator of the Gass Forest Museum, lectured on Botany and Science up to October; under the orders of Government he severed his connection with the teaching work of the college from November 1915. The lecturing in these two subjects had thereafter to be undertaken by the remaining members of the staff; an unsatisfactory arrangement which, it is hoped, will be remedied before long.

5. One post of Sub-Assistant Surgeon remained vacant throughout the year owing to military exigencies.

The other post was filled by—

M.R.Ry. T. S. Pichu Ayyar from 1st July to 15th September,
M.R.Ry. T. R. Srinivasa Ayyangar from 16th September to 2nd January, and
M.R.Ry. V. M. Ramunni Nayar from 9th January to the end of the year.

These officers lectured on first aid to the senior students.

6. Instruction in drill was given throughout the year by the two Havildars attached to the college.

Instruction in gymnastics could not be commenced during the year for lack of apparatus. Apparatus has since been set up and instruction started with the current session.

7. The Principal has no specific course of lectures and it is very undesirable that he should lecture regularly. He took special lectures on Botany for a short period when on tour and lectured to the senior students in working-plans during the ten days Mr. Bennett was in camp with the juniors in September, and again took all Mr. Bennett's lectures for a week in May. He also gave a few other special lectures.

In addition the Principal delivered a set of five lectures on Forestry in its connection with agriculture to the senior students of the Agricultural College.

### (2) *Board of Visitors.*

8. Mr. F. L. C. Cowley-Brown on leaving the College staff became Conservator of Forests, Northern Circle, vice Mr. A. W. Lushington retired, and joined the Board of Visitors of the college. During the year Messrs. C. D. McCarthy and S. Cox proceeded on leave and Messrs. H. B. Bryant and H. A. Latham took their places on the Board.

The Board met on two occasions at Coimbatore on the 15th October 1915 and on the 28th June 1916.

(3) *Students.*

9. The year began with 66 students, 30 of the 1914-16 division beginning their second year and 36 of the 1915-17 division who entered the college on the 29th July 1915.

At the close of the year the numbers had been reduced to 29 and 31, respectively, or a total of 60. The reduction in the case of the seniors is due to the death of one student in March, and in the case of the juniors to four students being sent down in December as unfit for training and to one being dismissed in May for deliberate and gross disobedience.

Two more of the junior students were removed for unfitness for further training at the close of the year so that the 1915-17 division started their second year 29 strong.

## CHAPTER II.—SCHOLASTIC RESULTS.

10. Twenty-nine students completed the two-years course in June 1916 and passed out of the college.

The following list shows for each man the certificate obtained, the order of merit and whether a British Government, Native State or private student:—

| Name of student. | Name of circle or State to which attached. |
|---|---|
| *Honours.* | |
| 1. C. M. Kunhiraman Nayar ... ... ... ... | Central Circle. |
| *Higher Standard.* | |
| 2. T. E. Varada Achari ... ... ... ... .. | Northern Circle. |
| 3. T. K. Parameswaram Pillai ... ... ... ... | Travancore State. |
| 4. Kerala Varma Tambiran ... ... ... ... | Do. |
| 5. D. Krishna Ayyangar ... ... ... ... | Do. |
| 6. C. T. Thiruvengadam ... ... ... ... ... | Northern Circle. |
| 7. M. N. Raman Pillai ... ... .. ... | Private. |
| 8. P. A. Krishnaswami Mudaliyar ... ... ... | Southern Circle. |
| 9. S. Srinivasa Rao ... ... ... ... ... | Western Circle. |
| 10. K. Kunhiroyan ... ... ... ... ... ... | Do. |
| 11. A. Swami Kutty ... ... ... ... ... | Do |
| 12. S. V. Sigbatullohi ... ... ... ... ..., | Southern Circle. |
| 13. C. H. Ashe ... ... ... ... ... ... | Do. |
| 14. G. Devanayagam Nayadu .. ... ... ... | Do. |
| 15. Korah Fenn ... ... ... ... ... ... | Cochin State. |
| 16. Syed Manavar ... ... ... ... ... ... | Southern Circle. |
| 17. B. Sambamurthi ... ... ... ... ... | Private. |
| 18. A. P. Srinivasa Ayyangar ... ... ... ... | Western Circle. |
| *Lower Standard.* | |
| 19. W. Balakrishna Mudaliyar ... ... ... ... | Northern Circle. |
| 20. K. Raghava Rao ... ... ... ... ... | Do. |
| 21. Gulam Rassool ... ... ... ... ... | Mysore State. |
| 22. K. Ramachendriah ... ... ... ... ... | Travancore State. |
| 23. T. S. Narayanaswami Chetti ... ... ... ... | Private. |
| *Failed.* | |
| 24. M. Krishna Ayyar ... ... ... ... ... | Central Circle. |
| 25. P. Krishnan ... ... ... ... ... ... | Western „ |
| 26. K. G. Sundaraja Rao ... ... ... ... ... | Central „ |
| 27. T. R. Naganatha Ayyar ... ... ... ... | Private. |
| 28. K. T. Venkatachar ... ... ... ... ... | Northern Circle. |
| 29. K. G. Srinivasa Rao ... ... ... ... ... | Central „ |

11. A very considerable change was caused by the elimination of grace marks. In the past two years grace marks up to a maximum of 500 were awarded to each student and added to his total marks which assisted him in some cases to obtain the next higher standard. The average number of marks so allotted were 419 and 444 in the two previous years, respectively. During the year under review, under the orders of Government, the grace marks were reduced to a maximum of 250 and no longer count in any way towards the marks necessary for qualification for the several certificates.

This affected very materially the number of honours certificates. Actually only one student earned this certificate, whereas with the assistance of 250 grace marks two more students would have obtained honours.

12. For the first time there were failures to qualify for any certificate and no less than six students left the college without a certificate of any kind.

The allotment of grace marks would not have affected this result since all failed to obtain pass marks in two or more of the major subjects, whereas grace marks were only added to the aggregate marks and not to the marks for individual subjects.

The failures can be ascribed only to the low standard of intelligence and previous education of the students who failed and point to the necessity for increased severity in removing students unfit for training before the second year of their training.

13. It is noteworthy that the single honours certificate was gained by a British Government student and that again the Travancore State students as a whole did well.

14. The prizes were awarded as follows :—

| | | |
|---|---|---|
| (1) C. M. Kunhiraman Nayar | ... | 1. Best student in Senior class.<br>2. Do. in Forestry.<br>3. Do. in Survey.<br>4. For Honours.<br>5. Campbell Walker.<br>6. Lodge.<br>7. Indian Forester. |
| (2) T. E. Varadachari ... | ... | 1. Best student in Range Administration.<br>2. Do. in Engineering. |
| (3) K. Kunhiroyan ... | ... | 1. Brazier. |
| (4) S. Ramachendra Ayyar ... | ... | 1. Best student of Junior class. |

15. All the twenty-nine students of the 1914—1916 division were examined in first aid by the District Medical and Sanitary Officer, Coimbatore, and his assistants. Twenty were successful in obtaining the certificate of the St. John's Ambulance Association.

The value of the instruction in first aid was practically demonstrated in several cases, notably when a player in a football match had the misfortune to dislocate his knee joint. One of the students very promptly and efficiently replaced the joint with a " click " which was much appreciated by the audience.

16. The 1914—1916 students were examined in drill by Mr. F. L. C. Cowley-Brown with satisfactory results. Emulating their immediate successors they learnt physical drill under the instruction of one of their members—K. Kunhiroyan, a former member of the late Moplah regiment of the Madras Army—and gave a demonstration before the Board of Visitors.

17. The final examinations in all the subjects were held by outside examiners and in the oral examinations one member of the Board of Visitors presided. The reports of the examiners are unanimous in regard to the generally low standard of intelligence and education of the students of the 1914—1916 division and the desirability of greater strictness in selection has been impressed on the Conservators.

Several valuable suggestions have been made by the examiners and these will be adopted as far as possible in future.

## Chapter III.—Administration.

### (*a*) *Board of Visitors.*

18. The Board of Visitors assembled twice during the year at Coimbatore: on the 15th October, taking the opportunity of the formal opening of the new college buildings by His Excellency the Governor, and on the 28th June after the final examinations had been held.

19. At the first meeting the following subjects were discussed :—

(i) *The Government memorandum passing orders on the draft calendar.*—The calendar was further revised and after final approval of Government was published in March 1916. It still lacks a good index and this will be provided in the 1916 edition.

(ii) *The estimate for laying out an athletic ground at the college.*—I am very sceptical as to the possibility of laying out a satisfactory ground without prohibitive expenditure. The whole matter is still pending with the Public Works Department and no active step towards an athletic ground had been taken by the end of the year.

(iii) *Allotment of studentships for the* 1916–18 *course.*—Final orders of Government have now been issued and the following students were admitted on 29th July 1916 :—

| | | |
|---|---|---|
| British Government | Northern Circle ... ... ... ... | 6 |
| | Central „ ... ... ... ... | 5 |
| | Southern „ ... ... ... ... | 6 |
| | Western „ ... ... ... ... | 6 |
| Hyderabad State ... ... ... ... ... ... ... | | 2 |
| Mysore State ... ... ... ... ... ... ... | | 1 |
| Travancore State ... ... ... ... ... ... ... | | 2 |
| Government of Ceylon ... ... ... ... ... ... | | 2 |
| „ of Coorg ... ... ... ... ... ... | | 1 |
| Private ... ... ... ... ... ... ... ... | | 3 |
| | Total ... | 34 |

(iv) *Provision of a swimming bath and a carriage shelter.*—The Board of Visitors considered that the former should be deferred and that the latter is necessary. Government, however, ordered that the carriage shelter could not be sanctioned under the present financial conditions.

(v) *The supply of a human skeleton at the Museum.*—This was approved, and one has been purchased and set up.

(vi) *The period of retention of Instructors' reports on students.*—It was decided that such reports need not be preserved and they are now destroyed as soon as they are no longer required.

(vii) *The preparation of Manuals of Sylviculture and Range Administration.*—These are now under preparation by Mr. R. D. Richmond, Deputy Conservator of Forests, and M.R.Ry. K. R. Venkatramana Ayyar, Extra Deputy Conservator of Forests, respectively.

(viii) *Advisability of refusing admission to the college to candidates who had not yet executed their bonds.*—It was decided that rule 17 of the College rules should be rigidly enforced. Happily there was no necessity to refuse admission to any student of the incoming year.

At the meeting in June, besides the results of the examinations and the allotment of medals, the following points were considered :—

(i) *The revised tour programme.*—The programme for 1915–16 which gave a continuous tour of six months with only one break at Christmas was admitted to be unsatisfactory and the Principal was directed to devise a fresh programme. The programme for 1916–17 submitted by the Principal was approved and it was recommended that it should not be departed from for a period of three years.

(ii) *Advance to students for the purchase of bicycles.*—This was not supported by the Board of Visitors ; but they consider that every student should provide himself with a bicycle before joining the college. The majority of the 1916–18 students came provided with bicycles and for the few remaining arrangements were made for them to obtain bicycles on easy terms.

(iii) *Grace marks.*—The Board did not approve of the proposal to allot grace marks for special attentiveness and activity.

(iv) *College blocks.*—Definite orders were given regarding the management of these blocks on points which were not clear hitherto and they will be taken over during the current year.

20. During the year the orders of Government were received on the proposals made at the Board of Visitors meeting of 28th June and 2nd July 1915. The principal points were as follows :—

(i) It was ordered that Mr. C. Srinivasa Rao should no longer remain on the lecturing staff.

(ii) The maintenance of the college estate and petty repairs to buildings was transferred to the Principal, subject to a maximum annual expenditure of Rs. 2,500.

(iii) The House Tutor is granted quarters rent free.

*(b) Touring.*

21. The following programme of touring was carried out during the year:—

| Dates. | 1914–16 Divison. | 1915–17 Division. |
|---|---|---|
| 15th to 25th September .. .. | .... | At Bolampatti. |
| 1st November to 27th November .. | Nilambur and Nedungayam Mount Stuart. | Nilambur and Nedungayam and 2 days in Calicut. |
| 28th November to Christmas holidays. | | |
| 4th January to 26th January .. | Walaiyar .. .. .. | Mount Stuart |
| 27th January to 3rd March .. | Javadi Hills .. .. .. | Kalakad camp. |
| 4th March to 26th March .. .. | Joint camp .. .. .. | At Bolampatti. |
| 1st April to 1st May .. .. | Coonoor .. .. .. .. | Ootacamund. |

The time taken to move from one camp to another has been included in the camp to which the move was made.

22. As far as possible works useful to the districts were carried out at each camp; but this motive was kept subordinate to the more important object in view, viz., that the work should be instructive to the students. The one exception was at Komuttiyeri, where, owing to a misunderstanding, marking in a sandal coupe was persisted in long after the instructional value of the work had ceased.

23. All work done is carefully recorded in the College journals and all observations made and points of interest or importance to the district are communicated to the District Forest Officer soon after leaving the district.

Thanks are due to the District Forest Officers of the districts visited and to their subordinates for their co-operation and assistance, especially to Messrs. Richmond (The Nilgiris), Barry (Tinnevelly) and K. R. Venkatramana Ayyar (South Vellore), who gave much personal assistance and whose arrangements were excellent.

*(c) Health.*

24. On the whole the season was unfavourable from the point of view of health, especially with regard to malaria. Practically every student was prostrated at one time or another by this disease. The touring season began badly with very heavy unseasonable rain in South Malabar and, probably, the foundation of future ill-health was laid here. At Mount Stuart, on the other hand, the dry season came early and the visit of the junior division at the close of the working season (in January) ran into the fever period.

25. One senior student, owing to inordinate exertion, unconnected with any College function, brought out malaria lurking in his system in a malignant form which caused his absence from the field and from lectures on frequent occasions during January, February and March. The frequent bouts of fever lowered his vitality so that when he contracted pneumonia, in the second half of March, his system was unable to make a stand and he succumbed very rapidly. On the 15th evening he was apparently well and participated in a game of football. He was prostrated with fever on the 17th and as he was not improving he was sent in to the Coimbatore hospital by cart (20 miles) on the 18th. Pneumonia, though not then suspected, was incipient. It developed very rapidly during the journey and was acute on his arrival at the Municipal hospital late at night. He died in the early hours of the 20th in spite of every care.

In addition to a few cases treated at the Municipal hospital, Coimbatore, or at one of the hospitals near the College camp when on tour, 996 cases were treated by the Sub-Assistant Surgeon attached to the College or by his assistant.

The cases are classified as follows:—

| | |
|---|---|
| (1) Malarial fever ... ... ... ... ... ... ... ... | 360 |
| (2) Digestive system, i.e., diarrhœa, dysentry, gastritis, etc. ... ... | 158 |
| (3) Respiratory system, i.e., catarrh, laryngitis, etc. ... ... ... | 115 |
| (4) Wounds, contusions, sprains, etc. ... ... ... ... ... | 105 |
| (5) Miscellaneous, headaches, eye trouble, teeth, etc. ... ... ... | 258 |

26. The present Sub-Assistant Surgeon Mr. V. M. Ramunni Nair has done his work well and zealously.

Until a second sub-assistant surgeon can be spared, some professional assistance is required in camp for one of the divisions and the services of a qualified compounder have been asked for recently. At present the sub-assistant surgeon accompanies that division which is camping where permanent medical assistance is most difficult to obtain and the dispensary lascar attends at the other camp.

(*d*) *Conduct.*

27. With one exception there were no serious cases of misconduct deserving more than trifling punishments in the shape of fine of a few grace marks.

The one case referred to was that of a junior student who left the college camp at Ootacamund for his home in Kumbakonam, not only without permission, but in direct disobedience of definite special orders. For three weeks nothing was heard of him. After consulting the members of the staff the Principal removed the defaulting student from the college.

28. *The staff* has worked hard and very efficiently, frequently under circumstances of considerable discomfort and stress.

29. *The clerical establishment* has worked hard and such defects as have obtruded themselves are due to inexperience, incapacity and want of method rather than to unwillingness or wantonness.

30. *The menial staff* is far from satisfactory and its members take every advantage of the lack of control during the absence of all authority when the staff is on tour.

The low pay coupled with the situation of the college, far removed from the " bazaar ", gives no hope of any improvement in the future.

31. This holds good particularly with regard to the care and improvement of the grounds and the arboretum. During the absence of the staff on tour the gardeners grossly neglected the avenue and hedge plants and a large number of them died. Being low-paid posts no skilled gardeners can be employed and for want of immediate supervision every operation is done in a wrong and negligent manner. The pruning of avenue trees cannot be left to them and what has been done so far has been done in person by the Principal and his wife.

So long as this state of things continues the College estate must continue to present the appearance of a desolate waste, which is in no way toned down by the building rubbish left here and there by the Public Works Department.

32. A further difficulty is the want of water. The present well and engine can only just meet the requirements of the staff and students during the hot weather, so that the supply from this source for watering purposes has to be cut off just at the time when it is most urgently required.

Sanction for the erection of a wind-driven pump over the arboretum well has been granted and this disability will disappear when this pump is in working order.

## Chapter IV.—The Gass Museum.

33. The transfer of the museum to the new site was not completed until the transfer of the college itself, though it had been begun in the previous year. A vast quantity of material had to be transported and re-arranged in the new building and this absorbed the energies of the Curator and Assistant Curator, Mr. Azizuddin, until well on in December. The Assistant Curator's post was then terminated and he reverted to his permanent post at the Agricultural college.

34. Mr. C. Srinivasa Rao, the Curator, arranged for the transport of the large mass of exhibits that were sent to Madras for the Industrial Exhibition held there in January and himself went to Madras to assist the Superintendent of the Forestry section in arranging them and subsequently in restoring them to the museum. Both at Coimbatore and Madras he worked very hard and efficiently.

35. He went on leave on 4th March 1916 and was posted from leave as ranger, fourth grade, to the North Coimbatore Forest division. It was not until the 8th May that a new Curator, Mr. G. Viswanathan, took charge of the museum and during the interval one of the clerks of the Principal's office acted as Curator.

36. With all these interruptions the normal business of the museum was more or less at a standstill and very little progress could be made with the revision of the catalogue, which has now become an urgent matter. The preparation has been pushed on latterly, however, and it is hoped to have it ready for the Press shortly.

37. The articles in the museum were considerably increased in number partly by exhibits sent by several District Forest Officers to the Madras Exhibition and transferred to the Gass Museum at its close and partly by direct contributions. One or two items were purchased. Until the new catalogue is completed it is not possible to give details of the addition.

38. Owing to the transfer to the new building the Museum was closed to the public from the beginning of the year until the 14th October. From that date up to 30th June 1916 the number of visitors (exclusive of visits by the staff or students) was 3,027.

## Chapter V.—General.

39. The chief points in the history of the College during the past year were (1) the move to the new College buildings on the 16th September, (2) the formal opening of the buildings by His Excellency the Governor on the 14th October and (3) the prize distribution on the 29th June, when His Excellency Lord Pentland again honoured the College by distributing the medals and certificates.

His Excellency laid the foundation stone of the main buildings in April 1913 and it was fitting that the same hand should open the entrance gate when the construction was completed. Both events are commemorated by inscribed stones recessed in the walls on either side of the main entrance.

At the time of the formal opening of the buildings Lord Pentland was good enough to offer a shield for all round athletics and has kindly given a fine silver shield which His Excellency presented to the first holder—senior student C. H. Ashe—at the time of the prize distribution. The shield itself is tenable for the year only, but each winner will be presented by a miniature by the athletic club as a permanent momento of his success.

### *Athletics.*

40. The interest in athletics was fully maintained during the year and the athletic club was ably managed by Mr. H. C. Bennett as Vice-President with the assistance of Mr. C. Srinivasa Rao in the first half and of Mr. R. B. Cornwell during the second half of the year as Secretary and of senior student Kunhiroyan as Assistant Secretary.

41. Hockey was played in the first half of the year and foot-ball on the second half year. Three members of the staff played regularly in the matches and practice games.

At hockey the success was not great, the record being four losses and a solitary win. At foot-ball the results of matches were more satisfactory, being five wins to one loss.

42. The annual sports were held on the 23rd October and the events were well contested. The cup presented by Mr. R. D. Richmond for the champion athlete was won by junior student C. S. Nanjappa.

43. Advantage was taken of the joint camp at Sadivayal in March to run off the Marathon race over the same ground as the previous year—an up and down-hill course of about 7 miles. All students fit and well competed. It was won easily in the good time of 57 minutes ($\frac{1}{2}$ a minute below the previous year's time) by junior student C. S. Nanjappa.

44. *Stock.*—The stock of all kinds was checked by the staff in July 1915 and no shortages were discovered.

45. The service registers have been posted up to date and the services verified up to the 1st July 1916.

Madras Forest College, Coimbatore,
25*th August* 1916.

C. E. C. Fischer,
*Principal.*

*Madras Forest College, Coimbatore*

SUMMARY of revenue and expenditure for the forest year 1915-16.

| Head of service. | Amount. Rs. A. P. |
|---|---|
| *Revenue.* | |
| I (*a*) | 10 0 0 |
| I (*d*) | 25 0 0 |
| V (*a*) | 0 4 0 |
| V (*b*) | 1,669 10 11 |
| Total | 1,704 14 11 |
| *Expenditure A.—Conservancy and works.* | |
| A (vi) (*c*) | 4,821 4 6 |
| A (vii) (*a*) | 15 10 0 |
| A (viii) (*e*) | 628 10 4 |
| A (viii) (*g*) | 316 3 1 |
| A (ix) (*b*) | 2,732 10 11 |
| Total | 8,514 6 10 |
| *B.—Establishment and contingencies.* | |
| B (i) (*b*) | 50,069 9 5 |
| B (i) (*c*) | 26,563 7 0 |
| B (i) (*d*) | 2,579 3 9 |
| B (i) (*d*) (*t*) | 727 10 10 |
| B (ii) (*b*) | 5,535 11 4 |
| B (ii) (*c*) | 2,209 13 0 |
| B (ii) (*d*) | 534 10 6 |
| B (iii) (*b*) (1) | 325 0 8 |
| B (iii) (*b*) (2) | 7,833 10 6 |
| Total | 96,378 13 0 |
| Grand total of A and B | 1,04,893 3 10 |

ABSTRACT showing the stock of stores, tools, etc., for the year ending 30th June 1916.

| District. | Description of stock. | On hand at commencement of the year (from 1st July 1915). Number. | Amount. Rs. A. P. | On hand at the end of the year (up to 30th June 1916). Number. | Amount. Rs. A. P. | Difference in value in favour of the year. Rs. A. P. | Difference in value against the year. Rs. A. P. |
|---|---|---|---|---|---|---|---|
| Madras Forest College, Coimbatore. | Surveying and other instruments. | 1,151 | 6,944 13 9 | 1,162 | 7,813 13 11 | 869 0 2 | .. |
| | Tools .. .. | 405 | 815 5 10 | 429 | 840 5 3 | 24 15 5 | .. |
| | Furniture* .. .. | 460 | 2,850 13 5 | 1,661 | 27,955 1 9 | 25,104 4 4 | .. |
| | Tents .. .. | 115 | 11,271 2 8 | 163 | 11,876 10 3 | 605 8 0 | .. |
| | Uniforms and accoutrements. | 308 | 828 6 11 | 76 | 190 0 0 | .. | 633 6 11 |
| | Science apparatus and chemicals. | 4,074 | 3,120 2 0 | 3,940 | 3,249 5 0 | 129 3 0 | .. |
| | Photographic instruments. | 2 | 604 8 0 | 9 | 612 4 0 | 7 12 0 | .. |
| | Gymnasium apparatus. | .. | .. | 9 | 478 0 0 | 478 0 0 | .. |
| | Miscellaneous .. | 487 | 1,737 1 9 | 1,674 | 2,423 4 0 | 686 2 3 | .. |
| | Total .. | 7,002 | 28,172 5 11 | 9,123 | 55,438 12 2 | 27,904 13 2 | 638 6 11 |

* Supplied by Public Works Department at new College building.

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# APPENDICES.

## Appendix A.—Comparative statement of number and origin of fires that occurred during 1915–16.

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire-traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and unknown causes. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | | | By intentional firing | | | | | | | | | |
| | | | | | By workmen employed in the forests, by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | Total. | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Northern Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Ganjām .. .. | 5 | 69 | 5 | 3,443 | 1 | 2 | 8 | 3,433 | .. | .. | .. | .. | 2 | 721 | 7 | 8,625 | 2 | 60 | 20 | 12,841 | 29 | 2,539 | 59 | 18,892 |
| Vizagapatam .. | 2 | 70 | 2 | 3 | .. | .. | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 22 | 4,968 | 28 | 5,043 |
| Gōdāvari, Upper. | .. | .. | 24 | 106,660 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 15 | 1 | .. | .. | .. | 3 | 15 | 18 | 27,493 | 45 | 134,168 |
| Do. Lower. | .. | .. | 6 | 104 | 2 | 58 | 25 | 6,102 | .. | .. | .. | .. | | .. | 1 | 8 | .. | .. | 28 | 6,168 | 20 | 1,404 | 54 | 7,676 |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | 13 | 2,954 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13 | 2,954 | .. | .. | 13 | 2,954 |
| Kurnool, East .. | 1 | 2,560 | 9 | 54,360 | .. | .. | 3 | 5,040 | .. | .. | .. | .. | 17 | 21,867 | .. | .. | 2 | 1,000 | 22 | 27,907 | 8 | 16,040 | 40 | 100,467 |
| Do. South .. | 2 | 10 | 17 | 60,183 | 3 | 946 | 3 | 2,650 | 9 | 5,819 | .. | .. | 4 | 905 | .. | .. | 6 | 12,308 | 25 | 22,628 | 23 | 17,621 | 67 | 100,442 |
| Do. West .. | .. | .. | 13 | 8,432 | 10 | 2,775 | 59 | 69,748 | .. | .. | .. | .. | .. | .. | . | .. | .. | .. | 69 | 72,523 | 6 | 3,320 | 88 | 84,275 |
| Total .. | 10 | 2,709 | 76 | 233,185 | 16 | 3,781 | 114 | 89,929 | 9 | 5,819 | .. | .. | 24 | 23,508 | 9 | 8,633 | 10 | 13,368 | 182 | 145,038 | 126 | 73,385 | 394 | 454,317 |
| *Central Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Bellary .. .. | 18 | 25,213 | .. | .. | .. | .. | 37 | 4,868 | .. | .. | 1 | 32 | .. | .. | .. | .. | .. | .. | 38 | 4,900 | 164 | 76,867 | 220 | (a) 106,980 |
| Anantapur .. | 6 | 2,640 | 20 | 4,914 | 2 | 22 | 13 | 1,047 | 1 | 600 | 2 | 3 | .. | .. | .. | .. | 17 | 1,915 | 35 | 3,587 | 81 | 50,485 | 142 | 61,626 |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | 20 | 3,030 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20 | 3,030 | .. | .. | 20 | (a) 3,030 |
| Cuddapah, West.. | 3 | 470 | 5 | 780 | 4 | 267 | 6 | 714 | .. | .. | .. | .. | 63 | 19,117 | . | .. | 9 | 16,806 | 82 | 36,904 | .. | .. | 90 | (a) 38,154 |
| Do. East.. | 8 | 52 | 53 | 41,422 | .. | .. | 10 | 3,362 | 2 | 151 | .. | .. | 166 | 125,040 | 1 | 9 | 9 | 3,066 | 188 | 131,628 | 5 | 745 | 254 | (a) 173,847 |
| Nellore .. .. | 1 | 1 | 17 | 5,207 | 1 | 140 | 1 | 120 | .. | . | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 260 | 4 | 513 | 24 | 5,981 |
| Chingleput .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 251 | 10 | 251 |
| Chittoor .. .. | 2 | 21 | 17 | 9,741 | 3 | 112 | 18 | 2,388 | 2 | 10 | 1 | 120 | 45 | 5,786 | .. | .. | 27 | 4,270 | 96 | 12,686 | 47 | 5,590 | 162 | 28,038 |
| Total .. | 38 | 28,397 | 112 | 62,064 | 10 | 541 | 105 | 15,529 | 5 | 761 | 4 | 155 | 274 | 149,943 | 1 | 9 | 62 | 26,057 | 461 | 192,995 | 311 | 134,451 | 922 | 417,907 |

(a) Includes area burnt in unprotected blocks in

| | Acs. |
|---|---|
| Bellary .. .. .. .. | 76,867 |
| Guntūr .. .. .. .. | 2,761 |
| Cuddapah, West .. .. .. | 1,269 |
| Cuddapah, East .. .. .. | 58,074 |
| Total .. | 138,971 |

## Appendix A.—Comparative statement of number and origin of fires that occurred during 1915–16—*cont.*

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire-traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | | | By intentional firing. | | | | | | | | | |
| | | | | | By workmen employed in the forests, by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | Total. | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| ***Southern Circle.*** | | | | | | | | | | | | | | | | | | | | | | | | |
| North Vellore .. | .. | .. | 3 | 1,932 | .. | .. | 5 | 831 | 2 | 3 | .. | .. | 4 | 845 | .. | .. | 8 | 543 | 19 | 2,222 | 65 | 9,318 | 87 | 13,472 |
| South do. .. | .. | .. | .. | .. | 3 | 132 | 9 | 214 | .. | .. | .. | .. | 46 | 11,906 | 14 | 4,581 | 2 | 410 | 74 | 17,243 | 92 | 19,827 | 166 | 37,069 |
| South Arcot .. | .. | .. | 1 | 5 | .. | .. | 2 | 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 16 | 2 | 100 | 5 | 122 |
| North Salem .. | 2 | 21 | 6 | 942 | 2 | 65 | 29 | 2,008 | .. | .. | .. | .. | 6 | 39 | 2 | 3,080 | 1 | 30 | 40 | 5,222 | 84 | 12,598 | 132 | 18,783 |
| South do. .. | 1 | 13 | 2 | 16 | .. | .. | 3 | 150 | .. | .. | .. | .. | 36 | 13,810 | .. | .. | 4 | 294 | 43 | 14,254 | 62 | 2,745 | 108 | 17,028 |
| Trichinopoly .. | .. | .. | 4 | 81 | .. | .. | 4 | 61 | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 203 | 9 | 264 | 3 | 162 | 16 | 506 |
| Madura .. .. | .. | .. | 42 | 4,021 | .. | .. | 7 | 387 | .. | .. | .. | .. | 12 | 3,022 | 3 | 550 | 13 | 2,753 | 35 | 6,712 | 64 | 12,576 | 141 | 23,309 |
| Tinnevelly .. | .. | .. | 7 | 191 | 1 | .. | 3 | 606 | .. | .. | 11 | 1,133 | 3 | 280 | 12 | 4,579 | .. | .. | 30 | 6,598 | 5 | 220 | 42 | 7,010 |
| Total .. | 3 | 34 | 65 | 7,188 | 6 | 197 | 62 | 4,273 | 2 | 3 | 11 | 1,133 | 107 | 29,902 | 31 | 12,790 | 33 | 4,233 | 252 | 52,531 | 377 | 57,546 | 697 | 117,299 |
| ***Western Circle.*** | | | | | | | | | | | | | | | | | | | | | | | | |
| Mangalore, North. | 2 | 2 | 8 | 229 | .. | .. | 20 | 887 | .. | .. | .. | .. | 3 | 31 | 5 | 58 | .. | .. | 28 | 976 | 3 | 87 | 41 | 1,294 |
| Do. South. | 3 | 15 | 15 | 339 | .. | .. | 29 | 637 | .. | .. | .. | .. | 12 | 360 | .. | .. | 8 | 256 | 49 | 1,253 | 14 | 295 | 81 | 1,902 |
| Malabar, North .. | 1 | 10 | 2 | 101 | .. | .. | 1 | 15 | .. | .. | 1 | 25 | .. | .. | .. | .. | 1 | 5 | 3 | 45 | 8 | 4,254 | 14 | 4,410 |
| Do. South. * | 2 | 15 | 3 | 248 | 2 | 175 | .. | .. | .. | .. | .. | .. | 1 | 1,500 | .. | .. | .. | .. | 3 | 1,675 | .. | .. | 8 | 1,938 |
| The Nilgiris * .. | 2 | 944 | 3 | 880 | .. | .. | 10 | 500 | .. | .. | .. | .. | 1 | 12 | 5 | 8,288 | 1 | 150 | 17 | 8,950 | 15 | 8,284 | 37 | 19,058 |
| Kollegal .. | 1 | 25 | 4 | 8,640 | 1 | 2 | 10 | 17,461 | .. | .. | .. | .. | 4 | 2,595 | 1 | 360 | 2 | 2,040 | 18 | 22,458 | 4 | 7,180 | 27 | 38,303 |
| Coimbatore, North. | 4 | 3,243 | 1 | 2,169 | .. | .. | 9 | 11,915 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 192 | 10 | 12,107 | 208 | 245,251 | 223 | 262,770 |
| Do. Central. | 7 | 662 | 6 | 749 | .. | .. | 2 | 172 | 3 | 80 | .. | .. | 9 | 999 | 1 | 86 | 16 | 4,877 | 31 | 6,214 | 46 | 2,940 | 90 | 10,565 |
| Do. South. | 3 | 1,501 | 2 | 372 | 14 | 972 | 13 | 395 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 50 | 28 | 1,417 | 9 | 286 | 42 | 3,576 |
| Total .. | 25 | 6,417 | 44 | 13,727 | 17 | 1,149 | 94 | 31,982 | 3 | 80 | 1 | 25 | 30 | 5,497 | 12 | 8,792 | 30 | 7,570 | 187 | 55,095 | 307 | 268,577 | 563 | 343,816 |
| Grand total .. | 76 | 37,557 | 297 | 316,164 | 49 | 5,668 | 375 | 141,713 | 19 | 6,663 | 16 | 1,313 | 435 | 208,850 | 53 | 30,224 | 135 | 51,228 | 1,082 | 445,659 | 1,121 | 533,959 | 2,576 | 13,33,339 |
| Grand total for 1914–15. | 88 | 20,161 | 174 | 164,934 | 37 | 8,520 | 201 | 25,558 | 12 | 427 | 3 | 646 | 274 | 77,779 | 37 | 14,692 | 110 | 49,446 | 674 | 177,068 | 457 | 92,110 | 1,396 | 454,273 |

* Includes the number of fires in the areas not under special protection.

APPENDIX B.—Comparative statement of impounded cattle for 1915–16.

| District. | Number of cattle impounded. | | Average for three years ending 1915–16. |
|---|---|---|---|
| | 1914–15. | 1915–16. | |
| *Northern Circle.* | | | |
| Ganjam .. .. .. .. | 1,160 | 1,035 | 1,016 |
| Vizagapatam .. .. .. | 1,057 | 2,152 | 1,468 |
| Godavari, Upper .. .. | 293 | 610 | 430 |
| Do. Lower .. .. .. | 1,167 | 1,185 | 1,050 |
| Kistna .. .. .. .. | 3,452 | 4,355 | 3,512 |
| Kurnool, East .. .. .. | 8,962 | 7,284 | 8,728 |
| Do. South .. .. .. | 5,332 | 3,275 | 3,885 |
| Do. West .. .. .. | 11,600 | 9,865 | 12,167 |
| Total .. | 33,023 | 29,761 | 32,256 |
| *Central Circle.* | | | |
| Bellary .. .. .. .. | 13,770 | 12,424 | 13,330 |
| Anantapur .. .. .. .. | 10,376 | 13,789 | 11,341 |
| Guntur .. .. .. .. | 28,178 | 29,456 | 25,721 |
| Cuddapah West .. .. .. | 8,800 | 9,969 | 10,214 |
| Do East .. .. .. | 5,569 | 6,214 | 5,805 |
| Nellore .. .. .. .. | 15,178 | 9,769 | 14,224 |
| Chingleput .. .. .. .. | 8,322 | 6,033 | 6,350 |
| Chittoor .. .. .. .. | 8,983 | 7,165 | 8,557 |
| Total .. | 99,176 | 94,813 | 95,542 |
| *Southern Circle.* | | | |
| North Vellore .. .. .. | 7,989 | 8,149 | 7,823 |
| South do. .. .. .. | 7,884 | 5,049 | 5,848 |
| South Arcot .. .. .. | 25,164 | 9,224 | 16,911 |
| North Salem .. .. .. | 4,418 | 3,771 | 4,354 |
| South do. .. .. .. | 6,708 | 4,553 | 5,036 |
| Trichinopoly .. .. .. | 5,047 | 2,594 | 5,433 |
| Madura .. .. .. | 7,318 | 5,035 | 6,062 |
| Tinnevelly .. .. .. | 2,328 | 2,900 | 2,964 |
| Total .. | 66,856 | 41,275 | 54,431 |
| *Western Circle.* | | | |
| Mangalore, North .. .. .. | 290 | 332 | 766 |
| Do. South .. .. .. | 457 | 609 | |
| Malabar, North .. .. .. | 82 | 15 | 42 |
| Do. South .. .. .. | 83 | 140 | 101 |
| The Nilgiris .. .. .. | 959 | 1,034 | 790 |
| Kollegal .. .. .. .. | 3,031 | 2,187 | 2,869 |
| Coimbatore, North .. .. .. | 2,437 | 3,923 | 2,807 |
| Do. Central .. .. | 1,411 | 766 | 1,055 |
| Do. South .. .. .. | 588 | 1,048 | 1,012 |
| Total .. | 9,338 | 10,054 | 9,442 |
| Grand total .. | 208,393 | 175,903 | 191,671 |

## Annual Form No. 65.

*Forest Department, Madras Presidency.*

### Area of reserved forests and reserved lands during 1915-16.

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1915. | | Added during the year. | Excluded during the year. | Area on 30th June 1916. | | Area on 1st July 1915. | | Added during the year. | Excluded during the year. | Area on 30th June 1916. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Northern Circle.* | | | | | | | | | | | | | |
| Ganjām .. .. .. | 364,132 | 569 | .. | 6,667 | 357,465 | 559 | 44,480 | (*a*) 69 | 8 | 3,080 | 41,408 | 65 | 624 |
| Vizagapatam .. .. .. | 199,013 | 311 | 385 | 27 | 199,371 | 312 | 1,712 | 3 | .. | 385 | 1,327 | (*b*) 2 | 314 |
| Gōdavari, Upper .. .. | 273,751 | 428 | 1,113 | .. | 274,864 | 429 | 226,489 | 354 | .. | 1,112 | 225,377 | 352 | 781 |
| Do. Lower .. .. | 258,276 | 404 | .. | .. | 258,276 | 404 | 47,955 | 75 | .. | .. | 47,955 | 75 | 479 |
| Kistna .. .. .. | 173,383 | 271 | .. | 1,951 | 171,432 | 268 | .. | .. | .. | .. | .. | .. | 268 |
| Kurnool, East .. .. | 640,302 | 1,000 | .. | .. | 640,302 | 1,000 | .. | .. | .. | .. | .. | .. | 1,000 |
| Do. South .. .. | 490,465 | 766 | .. | 26 | 490,439 | 766 | .. | .. | .. | .. | .. | .. | 766 |
| Do. West .. .. | 555,071 | 867 | .. | .. | 555,071 | 867 | .. | .. | .. | .. | .. | .. | 867 |
| Total .. | 2,954,393 | 4,616 | 1,498 | 8,671 | 2,947,220 | 4,605 | 320,636 | 501 | 8 | 4,577 | 316,067 | 494 | 5,099 |
| *Central Circle.* | | | | | | | | | | | | | |
| Bellary .. .. .. | 396,444 | 619 | .. | .. | 396,444 | 619 | 40,000 | 63 | .. | .. | 40,000 | 63 | 682 |
| Anantapur .. .. .. | 475,321 | 743 | 9,061 | 3,722 | 480,660 | 751 | 6,578 | 10 | 91 | 6,218 | 451 | 1 | 752 |
| Guntūr .. .. .. | 521,247 | 814 | .. | 5 | 521,242 | 814 | .. | .. | .. | .. | .. | .. | 814 |
| Cuddapah, West .. .. | (*c*) 470,077 | 734 | 1,180 | 6,861 | 464,396 | 726 | .. | .. | 1,963 | 16 | 1,947 | 3 | 729 |
| Do. East .. .. | 693,471 | 1,084 | .. | .. | 693,471 | 1,084 | 158 | .. | 19 | .. | 177 | .. | 1,084 |
| Nellore .. .. .. | 466,396 | 729 | 5,423 | 9,661 | 462,158 | 722 | .. | .. | 815 | .. | 815 | 1 | 723 |
| Chingleput .. .. .. | 133,454 | 209 | .. | 372 | 133,082 | 208 | 9 | .. | .. | 9 | .. | .. | 208 |
| Chittoor .. .. .. | 536,470 | 838 | .. | 4,597 | 531,873 | 831 | 42 | .. | .. | .. | 42 | .. | 831 |
| Total .. | 3,692,880 | 5,770 | 15,664 | 25,218 | 3,683,326 | 5,755 | 6,787 | 73 | (*d*) 2,888 | (*e*) 6,243 | 43,432 | 68 | 5,823 |

(*a*) Last year's figure rectified.

(*b*) Includes 2·05 sq. miles of Karakavalasa leased forests and East and West blocks.

(*c*) The difference between the closing balance of last year and the opening balance of this year in column 2 is due to non-inclusion of 3·78 acres of Diguvakalvatala enclosure to Kondasunkesula reserve in Cuddapah district

(*d*) Of the total area of 2,888 acres added, 19 acres relate to correct area at settlement and the rest notified under section 4.

(*e*) 6,243 acres excluded represent 4,983 acres transferred to reserved forests, 9 acres due to cancellation of notification and the balance of 1,251 acres is due to wrong inclusion originally in Yerrakonda extension II, Anantapur district.

## Area of reserved forests and reserved lands during 1915-16—*cont.*

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1915. | | Added during the year. | Excluded during the year. | Area on 30th June 1916. | | Area on 1st July 1915. | | Added during the year. | Excluded during the year. | Area on 30th June 1916. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Southern Circle.* | | | | | | | | | | | | | |
| North Vellore .. .. | 314,129<br>(*a*) — 676<br>(*b*) — 8,634 | 491<br>— 1<br>— 14 | .. | 23 | 304,795 | 476 | 72 | .. | 1,165 | .. | 1,237 | 2 | 478 |
| South do. .. .. | 455,593<br>(*a*) — 262<br>(*b*) +8,634 | 712<br>— 1<br>+ 14 | 4 | .. | 463,969 | 725 | 27 | .. | .. | 4 | 23 | .. | 725 |
| South Arcot *cum* Tanjore .. | 214,824<br>(*c*)+11,823 | 336<br>+ 18 | .. | 977 | 225,670 | 353 | .. | .. | .. | .. | .. | .. | 353 |
| North Salem .. .. | 507,374 | 792 | .. | 32 | 507,342 | 792 | 29,290 | 46 | 430 | (*d*) 4,878 | 24,842 | 39 | 831 |
| South do. .. .. .. | 371,681<br>(*e*) — 13 | 581 | .. | .. | 371,668 | 581 | 11,620<br>(*e*)+ 13 | 18 | .. | .. | 11,633 | 18 | 599 |
| Trichinopoly .. .. .. | 227,098<br>(*c*)—11,823<br>(*f*) — 1,708 | 355<br>— 18<br>— 3 | (*i*) 1,344 | (*h*) 3,359 | 211,552 | 331 | 5,769 | 9 | .. | (*i*) 1,525<br>(*h*) 621 | 3,623 | 6 | 337 |
| Madura .. .. .. | 420,835<br>(*f*)+ 1,708 | 657<br>+ 3 | 10 | 203 | 422,350 | 660 | 10 | .. | 2 | 10 | 2 | .. | 660 |
| Tinnevelly .. .. .. | 274,298 | 429 | 27 | .. | 274,325 | 429 | 74 | .. | 137 | (*g*) 72 | 139 | .. | 429 |
| Total .. | 2,785,832<br>— 951 | 4,353<br>— 2 | 1,385 | 4,594 | 2,781,672 | 4,347 | (*o*) 46,862<br>+ 13 | 73 | 1,734 | 7,110 | 41,499 | 65 | 4,412 |
| *Western Circle.* | | | | | | | | | | | | | |
| Mangalore, North .. .. | * 231,955 | 362 | 92 | .. | 232,047 | 362 | 92 | | .. | § 92 | .. | .. | 362 |
| Do. South .. .. | * 278,792 | 436 | 8 | .. | 278,800 | 436 | 8 | .. | .. | § 8 | .. | .. | 436 |
| Malabar, North .. .. | 168,098<br>† — 22 | 263 | .. | .. | 168,076 | 263 | † 22 | .. | .. | .. | 22 | .. | 263 |
| Do. South .. .. | 91,525 | 143 | .. | .. | 91,525 | 143 | 12,805 | 20 | (*k*) 5 | .. | 12,810 | 20 | 163 |
| The Nilgiris .. .. | 303,919 | 475 | 5 | .. | 303,924 | 475 | 49,832<br>‡ 2,918 | 78<br>5 | 1,433 | § 5<br>(*m*) 48 | 51,212<br>2,918 | 80<br>5 | 560 |
| Kollegal .. .. .. | 467,212 | 730 | 227 | .. | 467,439 | 730 | 443 | 1 | 10 | § 227 | 226 | .. | 730 |
| Coimbatore, North .. .. | 589,978 | 922 | .. | (*j*) 3,806 | 586,172 | 916 | 229 | .. | 430 | .. | 659 | 1 | 917 |
| Do. Central .. | 225,963 | 353 | 6,367 | .. | 232,830 | 363 | 6,450 | 10 | (*l*) 768 | § 6,367<br>(*n*) 209 | 642 | 1 | 364 |
| Do. South .. .. | 290,652 | 454 | 88 | .. | 290,740 | 454 | 142 | .. | .. | § 85 | 54 | .. | 454 |
| Total .. | 2,648,072 | 4,138 | 6,787 | 3,806 | 2,651,053 | 4,142 | 72,941 | 114 | 2,646 | 7,044 | 68,543 | 107 | 4,249 |
| Grand total .. | 12,080,226 | 18,875 | 25,334 | 42,289 | 12,063,271 | 18,849 | 487,239 | 761 | 7,276 | 24,974 | 469,541 | 734 | 19,583 |

(*a*) Reduction made on account of correct computation of areas of certain reserves.
(*b*) Transfer from North to South Vellore.
(*c*) Transfer from Trichinopoly to South Arcot.
(*d*) Area excluded at the time of settlement in Hudaldurgam reserve.
(*e*) Reserved land erroneously included under reserve in previous years.
(*f*) Transfer from Trichinopoly to Madura.
(*g*) Difference is due to actual area found at the time of settlement.
(*h*) Areas transferred to Public Works Department.
(*i*) Difference excluded at the time of settlement.

* The excess of one acre is due to rounding off fractions in the distribution of areas to the two divisions.
† Reserved lands wrongly included in the last year's return.
‡ Toda patta lands.
§ Transferred to reserved forests.
(*j*) Disafforested.
(*k*) Rectification due to adoption of survey of India figures.
(*l*) Recomputation of areas.
(*m*) Excluded from reservation
(*n*) Excluded at settlement.
(*o*) Corrected in the Board's office.

ANNUAL

*Forest Department,*

STATEMENT showing the progress made in, and the

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | |
|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts. | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Northern* |
| | SQ. MLS. | | | SQ. MLS. | RS. | | |
| Ganjām .. | (*a*) 559 | .... | .... | .. | .. | .. | .. |
| Vizagapatam. | 311 | G.O. No. 2004, Revenue, dated 3rd September 1915. | Busilikota and Rayipalem enclosures in Sanivaram reserve. | 0·60 | .. | .. | .. |
| Godāvari, Upper. | 428 | G.O. No. 2377, Revenue, dated 27th October 1915. | Pedakonda extension I .. | 1·23 | .. | .. | .. |
| | | | Enakuru extension II .. | (*c*) 0·51 | .. | .. | .. |
| Godāvari, Lower. | 404 | .... | .... | .. | .. | .. | .. |
| Kistna .. | (*d*) 268 | .... | .... | .. | .. | .. | .. |
| Kurnool, East. | 1,000 | .... | .... | .. | .. | .. | .. |
| Kurnool, South. | 766 | .... | .... | .. | .. | .. | .. |
| Kurnool, West. | 867 | .... | .... | .. | .. | .. | .. |
| Total .. | 4,603 | | | 2·34 | .. | .. | .. |
| | | | | | | | *Central* |
| Bellary .. | 619 | .... | .... | .. | .. | .. | .. |
| Anantapur.. | 743 | G.O. No. 1345, Revenue, dated 8th June 1915. | Yerrakonda extension No. II. | 7·76* | .. | .. | .. |
| | | .... | .... | .. | .. | .. | .. |
| | | .... | .... | .. | .. | .. | .. |
| Guntūr .. | 814 | .... | .... | .. | .. | .. | .. |
| Cuddapah, West. | 734 | G.O. No. 2838, Revenue, dated 18th December 1915. | Faridpenta enclosure to Palakondas. | 0·024 | 152 | .. | .. |
| Cuddapah, East. | 1,084 | .... | .... | .. | .. | .. | .. |
| | .. | .... | .... | .. | .. | .. | .. |
| Nellore .. | 729 | .... | .... | .. | .. | .. | .. |

(*a*) An area of 10 square miles was disafforested during the year.
(*c*) Correct figure now reported.
(*d*) Difference due to disafforestation and rectification of boundary.
* This is the correct extent as notified under section 16.

FORM No. 66.

*Madras Presidency.*

expenditure incurred on, Forest Settlements during 1915–16.

| Areas undergoing settlement. | | | | | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | Expenditure incurred during the year on areas undergoing settlement. | | |
| Name of tract. (9) | Area in square miles. (10) | Name of tract. (11) | Area in square miles. (12) | In forest accounts. (13) | In other accounts. (14) | (15) |
| *Circle.* | | | | | | |
| | SQ. MLS. | | SQ. MLS. | RS. | | SQ. MLS. |
| Chokkapad .. .. .. | (*b*)64·69 | Kriamba enclosure .. .. | 0·13 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| Nugur .. .. .. .. | 246·61 | .... | .. | .. | .. | Cherla block area 56·16. |
| Pedamidisileru .. .. .. | 96·48 | .... | .. | .. | .. | .. |
| Busipakala .. .. .. | 1·88 | .... | .. | .. | .. | .. |
| Kansulur reserve, Vandalur-gondi extension I. | 0·82 | .... | .. | .. | .. | .. |
| Tulluvada extension V .. | 0·50 | .... | .. | .. | .. | .. |
| Valsugri reserve, Korrajula-gudem extension I. | 1·93 | .... | .. | .. | .. | .. |
| Gummadakonda extension III to Rekapalli hill reserve. | 2·40 | .... | .. | .. | .. | .. |
| Dhanukonda extension IV to Rekapalli hill reserve. | 1 58 | .... | .. | .. | .. | .. |
| Coringa extension .. .. | 75 | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | 491·84 | | 0·13 | .. | .. | 56·16 |
| *Circle.* | | | | | | |
| .... | .. | .... | .. | .. | .. | .. |
| Bhadrapur extension .. .. | 0·56 | .... | .. | 462 | .. | .. |
| Addition to Amagondapalayam. | 0·02 | .... | .. | .. | .. | .. |
| Addition to Peddoddi reserve. | 0·09 | Addition to Dadilkota reserve. | 0·06 | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| Pentahs in Palakondas .. .. | 0·28 | Putlampatti shrotriyam forest. | 2·76 | .. | .. | .. |
| Thummalabylu .. .. | 0·116 | .... | .. | .. | .. | .. |
| Palakondas .. .. .. | 0·13 | .... | .. | .. | .. | .. |
| .... | .. | Addition to Gudlur South R.F. | 0 04 | .. | .. | .. |

(*b*) Difference between this and last year's figure is due to recomputation of area.

Statement showing the progress made in, and the expenditure

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Central* |
| | SQ. MLS. | | | SQ. MLS. | RS. | | |
| | .. | .. | .... | .. | .. | .. | .. |
| | .. | .... | .... | .. | .. | .. | .. |
| | .. | .... | .... | .. | .. | .. | .. |
| Chingleput. | 209 * | .. | .... | .. | .. | .. | .. |
| Chittoor .. | 838 | .... | .... | .. | .. | .. | .. |
| | .. | .... | .... | .. | .. | .. | .. |
| Total .. | 5,770 | | | 7·784 | 152 | .. | .. |
| | | | | | | | *Southern* |
| Vellore, North. | 491<br>(*a*) — 1<br>(*b*) —14 | .... | .... | .. | .. | .. | .. |
| Vellore, South. | 712<br>(*a*)— 1<br>(*b*)+ 14 | G.O. No. 419, Rev., dated 23rd February 1916. | Addition to Andiappanur reserved forest. | ·0062 | 147 | .. | .. |
| Arcot, South. | 336<br>(*c*)+ 18<br>(*d*)— 1 | .... | .... | .. | .. | .. | .. |
| Salem, North. | 792 | .... | .... | .. | .. | .. | .. |
| Salem, South. | 581 | .... | .... | .. | .. | .. | .. |
| Trichinopoly | 355<br>(*c*) — 18<br>(*f*)— 3<br>(*g*) — 5 | G.O. No. 1285, Rev., dated 31st May 1915. | V. Kanapadi extension block. | 0·8607 | .. | .. | .. |
| | .. | G.O. No. 2055, Rev., dated 9th September 1916. | Palamalai extension block .. | 1·24 | .. | .. | .. |
| Madura .. | 357<br>(*f*)+ 3 | G.O. No. 1764, Rev., dated 29th July 1915. | Addition to Southern slopes .. | 0·0062 | .. | .. | .. |
| | | G.O. No. 132, Rev., dated 21st January 1916. | Addition to Pambar reserve .. | 0·0014 | .. | .. | .. |
| | | G.O. No. 251, Rev., dated 5th February 1916. | Addition to Adukkam reserve. | 0·0082 | 85 | .. | .. |
| Tinnevelly. | 429 | G.O. No. 2246, Rev., dated 6th October 1915. | Tirukkuttachala parvatam estate. | 0·057 | .. | .. | .. |
| Ramnad division. | | .... | Mailodai estate part .. .. | 0·057 | .. | .. | .. |
| Total .. | 4,345 | | | 2·2367 | 232 | .. | .. |

* The reservation of Nandambakkam extension II in Chingleput district was cancelled.

(*a*) Deduction on account of correct computation of area.

(*b*) Deduction on account of transfer of reserves from North to South Vellore.

(*c*) Area transferred from Trichinopoly to South Arcot.

nourred on, Forest Settlements during 1915-16—*cont.*

| Areas undergoing settlement | | | | Expenditure incurred during the year on areas undergoing settlement. | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | | | |
| Name of tract. (9) | Area in square miles. (10) | Name of tract (11) | Area in square miles. (12) | In forest accounts. (13) | In other accounts. (14) | (15) |
| *Circle*—cont. | | | | | | |
| | SQ. MLS. | | SQ. MLS. | RS. | | SQ. MLS. |
| .... .. | | Kavali extension No. II .. | 0·08 | .. | .. | .. |
| .... .. | | Cherlopalli addition .. | 0·02 | .. | .. | .. |
| .... .. | | Sriharikota enclosure .. | 1·14 | .. | .. | .. |
| .... .. | | .... | .. | .. | .. | .. |
| Addition to Gundlur reserve .. | ·015 | .... | | .. | .. | .. |
| Addition to Ankalammakonda. | ·05 | .... | .. | .. | .. | .. |
| | 1·261 | | 4·10 | 462 | .. | .. |
| *Circle.* | | | | | | |
| Korapet extension .. .. | 0·0844 | Sanankuppam .. .. .. | ·0042 | 1,153 | .. | .. |
| Sholavaram .. .. .. | 0·0281 | Addition to Banavaram reserve. | ·0703 | .. | .. | .. |
| | | Tiruvallam plantation .. | ·6834 | .. | .. | .. |
| | | Virinjipuram .. .. .. | ·4941 | .. | .. | .. |
| | | Ammundi .. .. .. | ·2500 | .. | .. | .. |
| | | Vannivedu .. .. .. | ·0898 | .. | .. | .. |
| | | Kilminnal .. .. .. | ·2281 | .. | .. | .. |
| Singarapet extension, Survey Nos. 129 and 130 of Sembarai village. | 0·0348 | .... | .. | 1,756 | .. | |
| .. .. | .. | .. .... | | .. | .. | .. |
| Hudaidurgam 4 blocks .. | (e) 38 | Bevanurmalai 2nd extension. | ·0078 | .. | .. | .. |
| | | Bathanavadi extension .. | ·6640 | .. | .. | .. |
| Arana .. .. .. .. | 8 | .... | .. | .. | .. | .. |
| Tirtagiri .. .. .. .. | 3 | .... | .. | .. | .. | .. |
| Jarugamalai .. .. .. | 12 | .... | .. | .. | .. | .. |
| Tirumanur extension .. .. | ·0200 | | .. | .. | .. | .. |
| Gundur .. .. .. | 3·85 | .... | .. | .. | .. | 0·83 |
| Ariyur shola block .. .. | 1·81 | .... | .. | .. | .. | .. |
| Vengur padugais .. .. | (g) .. | .... | .. | .. | .. | .. |
| | | | (a) | | | |
| .... .. | | Addition to Shengalvarayar reserve. | 0·0039 | .. | .. | .. |
| .. .. .. | | .... | .. | .. | .. | .. |
| .. .. .. | | .... | .. | .. | .. | .. |
| .. .. .. | | Kuliratti enclosure .. .. | 0·214 7 | .. | .. | .. |
| Srivilliputtur ghat forests .. | ·0027 | .. .. | .. | .. | .. | .. |
| | 61·83 | | 2·7103 | 2,909 | .. | 0·83 |

(*d*) Area disafforested.
(*e*) The difference is due to area thrown out at Forest settlement.
(*f*) Area transferred to Madura.
(*g*) Area transferred to Public Works Department.

Statement showing the progress made in, and the expenditure

| Name of forest district. | Area already settled at commencement of year. | Areas finally settled during the year. | | | | | |
|---|---|---|---|---|---|---|---|
| | | Number and date of Government Order according final sanction to the settlement. | Name of forest settled. | Area in square miles. | Expenditure incurred during the year on areas finally settled. | | Entire cost per square mile of areas finally settled during the year. |
| | | | | | In forest accounts. | In other accounts. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | | | | | *Western* |
| | SQ. MLS. | | | SQ. MLS. | RS. | | |
| Mangalore, North. | 362 | G.O. No. 1889, dated 16th Aug. 1915. | Madibare extension No. I .. | ·14 | .. | .. | .. |
| | | | Do. extension No. II .. | | | | |
| Total .. | 362 | | | ·14 | .. | .. | .. |
| Mangalore, South. | 436 | G.O. No. 1676, dated 17th July 1915. | Subrahmanya extension No. I. | ·007 | .. | .. | .. |
| | | G.O. No. 1677, dated 17th July 1915. | Aletti addition No. I .. | ·006 | .. | .. | .. |
| Total .. | 436 | | | ·013 | .. | .. | .. |
| Malabar, North. | 263 | .... | .... | .. | .. | .. | .. |
| Malabar, South. | 143 | .... | .... | .. | .. | .. | .. |
| The Nilgiris. | 475 | G.O. No. 2116, dated 17th Sep. 1915. | Snowdon addition No. II .. | ·008 | .. | .. | .. |
| Total .. | 475 | | | ·008 | .. | .. | .. |
| Kollegal .. | 730 | G.O. No. 2644, dated 29th Nov. 1915. | Yedarhalli addition No. IV .. | ·003 | .. | .. | .. |
| | | G.O. No. 2918, dated 29th Dec. 1915. | Chikkailuru extension No. II. | ·006 | .. | .. | .. |
| | | G.O. No. 114, dated 19th Jan. 1916. | Hanur addition A .. .. | ·023 | .. | .. | .. |
| | | | Do. do. B .. .. | ·001 | .. | .. | .. |
| | | | Do. do. C .. .. | ·006 | .. | .. | .. |
| | | G.O. No. 516, dated 7th March 1916. | Yedarhalli addition No. II .. | ·253 | .. | .. | .. |
| Total .. | 730 | | | ·292 | .. | .. | .. |
| Coimbatore, North. | 922 (*a*) — 6 | .... | .... | .. | .. | .. | .. |
| | | .... | .... | .. | .. | .. | .. |
| Total. | 916 | | | .. | .. | .. | .. |
| Coimbatore, Central. | 353 | G.O. No. 2479, dated 8th Nov. 1915. | Survey Nos. 93-A and 93-B of Kummarampalayam (enclosures in Gopinari reserve). | ·006 | .. | .. | .. |
| | | G.O. No. 2890, dated 24th Dec. 1915. | Anaikatti block, North .. | 1·76 (*b*)+1·14 | .. | .. | .. |
| | | | Do. do. South .. | 7·36 (*c*) — ·32 | .. | .. | .. |
| Total .. | 353 | | | 9·946 | .. | .. | .. |
| Coimbatore, South. | 454 | G.O. No. 527, dated 8th March 1916. | Additions to Punachi reserve No. II. | ·14 | 1,576 | .. | .. |
| Total .. | 454 | | | ·14 | 1,576 | .. | .. |
| Grand total. | 4,132 | | | 10·53 or 10 | 1,576 | .. | .. |

(*a*) Disafforested.
(*b*) Recomputation of areas.

incurred on, Forest Settlements during 1915-16—*cont.*

| Areas undergoing settlement. | | | | | | Estimate of areas in which settlement operations have not yet commenced. |
|---|---|---|---|---|---|---|
| At commencement of the year. | | Taken in hand during the year. | | Expenditure incurred during the year on areas undergoing settlement. | | |
| Name of tract. | Area in square miles. | Name of tract. | Area in square miles. | In forest accounts. | In other accounts. | |
| (9) | (10) | (11) | (12) | (13) | (14) | (15) |
| *Circle.* | | | | | | |
| | SQ. MLS. | | SQ. MLS. | RS. | | SQ. MLS. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | .. | | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | .. | | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | |
| Benne addition No. III .. | ·135 | Naduhatti addition No. I .. | ·003 | .. | .. | 1·84 |
| Do. do. No. IV .. | ·098 | Rangaswami Peak .. .. | 2·23 | .. | .. | |
| Kalmalai addition .. .. | ·064 | .... | .. | .. | .. | |
| Ammankaval addition No. IV. | (*d*) .. | .... | .. | .. | .. | |
| Cherambadi addition No. V. | (*d*) .. | .... | .. | .. | .. | |
| | ·297 | | 2·233 | .. | .. | 1·84 |
| Yedarhalli addition No. I .. | ·036 | Yedarhalli addition No. VII. | ·01 | 3,565 | .. | 1·39 |
| Do. No. III .. | ·016 | .... | .. | .. | .. | |
| Do. No. V .. | ·030 | .... | .. | .. | .. | |
| Do. No. VI .. | ·160 | .... | .. | .. | .. | |
| Chikkailuru addition No. I .. | ·103 | .... | .. | .. | .. | |
| Chikkailuru extension Nos. III and IV. | ·051 | .... | .. | .. | .. | |
| .... | .. | .... | .. | .. | .. | |
| .... | .. | .... | .. | .. | .. | |
| | ·396 | | ·01 | 3,565 | .. | 1·39 |
| Enclosures in South Bargur reserve and its additions. | ·160 | Enclosures in the Gutialattur reserve. | ·672 | .. | .. | .. |
| Enclosures in North Bargur reserve and its additions. | ·198 | .... | .. | .. | .. | .. |
| | ·358 | | ·672 | .. | .. | .. |
| Sundapatti additions Nos. 2 to 20. | ·80 (*b*)+·05 | .... | .. | 45 | .. | .. |
| Addition to Thadagam block No. IV. | ·06 | .... | .. | .. | .. | .. |
| Thadagam additions Nos. 2 to 21. | ·087 | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| .... | .. | .... | .. | .. | .. | .. |
| | ·997 | | .. | 45 | .. | .. |
| Additions to Anamalai reserve. | ·08 | .... | .. | .. | .. | .. |
| | ·08 | | .. | .. | .. | .. |
| | 2·12 | .... | 2·91 | 3,610 | .. | 3·23 |

(*c*) Excluded at settlement.
(*d*) Excluded from reservation.

## ANNUAL FORM No. 67.

*Forest Department, Madras Presidency.*

RECORD of demarcation and maintenance of boundaries during 1915-16.

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of the year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Northern Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Ganjam .. .. | (*h*) 4 | (*a*) & (*i*) 1,247 | 117 | (*j*) 1,368 | .. | (*k*) 80 | (*l*) 1,448 | (*b*) 551 (*m*) | (*n*) 19 |
| Vizagapatam .. .. | .. | (*a*) 533 7 | .. | 540 | 24 | 19 | 583 | .. | 325 |
| Godavari, Upper .. | .. | .. 425 | .. | 425 | .. | 143 | 568 | .. | 962 |
| Do. Lower .. | .. | (*a*) 727 33 | 25 | 785 | .. | 51 | 836 | .. | 1,120 |
| Kistna .. .. | .. | (*a*) 354 11 | 204 | 569 | .. | 41 | 610 | .. | 199 |
| Kurnool, East .. | .. | (*a*) 688 .. | 15 | 703 | .. | 48 | 751 | .. | 298 |
| Do. South .. | .. | (*a*) 601 .. | 28 | 629 | .. | 5 | 634 | .. | 324 |
| Do. West .. | .. | (*a*) 118 203 | 609 | 930 | .. | 100 | 1,030 | .. | 604 |
| Total .. | 4 | 679 (*a*) 4,268 | 998 | 5,949 | 24 | 487 | 6,460 | 551 | 3,851 |
| *Central Circle.* | | | | | | | | | |
| Bellary .. .. | 15 | .. | 1,731 | 1,746 | 6 | .. | 1,752 | 255 | 15 |
| Anantapur .. .. | 7 | 38 | 1,787 | 1,832 | 15 | .. | (*c*) 1,847 | 163 | 1,020 |
| Guntur .. .. | .. | 17 | 1,375 | 1,392 | .. | | 1,392 | | 481 |
| Cuddapah, West .. | .. | 8 (*a*) 445 | 917 | 1,370 | .. | 29 | (*c*) 1,399 | .. | 294 |
| Do. East .. | .. | 59 (*a*) 184 | 672 | 915 | .. | 46 | 961 | .. | 1,483 |
| Nellore .. .. | .. | 1,720 | 275 | 1,995 | .. | 84 | (*c*) 2,079 | .. | 967 |
| Chingleput .. .. | .. | 868 | .. | 868 | .. | .. | (*c*) 868 | .. | 499 |
| Chittoor .. .. | .. | 1,447 | .. | 1,447 | .. | 60 | (*c*) 1,507 | .. | 1,628 |
| Total .. | 22 | 4,157 (*a*) 629 | 6,757 | 11,565 | 21 | 219 | 11,805 | 418 | 6,387 |
| *Southern Circle.* | | | | | | | | | |
| North Vellore .. | .. | 1,130 | .. | 1,130 | .. | 1 | (*d*) 1,131 | .. | 39 |
| South do. .. | .. | 1,047 | 108 | 1,155 | .. | 28 | (*d*) 1,183 | .. | 175 |
| South Arcot .. .. | .. | 1,201 | .. | 1,201 | .. | .. | (*e*) 1,201 | .. | 45 |
| North Salem .. .. | .. | 900 | 429 | 1,329 | .. | 40 | 1,369 | .. | 500 |
| South do. .. .. | .. | 903 | 240 | 1,143 | .. | 5 | 1,148 | .. | 354 |
| Trichinopoly .. .. | 13 | 897 | 68 | 978 | 3 | 24 | (*f*) 1,005 | 154 | 39 |
| Madura .. .. | 57 | 975 | 406 | 1,438 | 121 | 178 | (*g*) 1,737 | 2,226 | 23 |
| Tinnevelly .. .. | .. | 10 | 494 | 504 | .. | 14 | 518 | .. | 514 |
| Total .. | 70 | 992 (*a*) 6,071 | 1,745 | 8,878 | 124 | 290 | 9,292 | 2,380 | 1,689 |

(*a*) Cleared by Forest subordinates free of cost.

(*b*) Rupees 88 for outer boundary and Rs. 50 for enclosures. Rupees 413 were spent on construction of 1,890 cairns on the lines in Chokkapad cut during the previous year.

(*c*) Due to addition or disafforestation of reserves.

(*d*) The difference of 15 miles between the figures of the previous year and the year under reference was due to portions of Thellai, Malayalam and Arasampattu reserves having been transferred from North to South Vellore.

(*e*) There was an increase of 79 miles due to the transfer of Tanjore reserves from Trichinopoly and a decrease of 30 miles due to the disafforestation of certain reserves and casuarina plantations and to the handing over a reserve to Public Works Department.

(*f*) The difference between the figures of the previous year and the year under reference was due to transfer of 79 miles of reserves to South Arcot, 5 miles to Madura and 51 miles to Public Works Department.

(*g*) The increase of 5 miles was due to the transfer of a reserve from Trichinopoly.

(*h*) Excludes 47 miles belonging to Parlakimedi Maliahs.

(*i*) Do. 458 do. do.

(*j*) Do. 505 do. do.

(*k*) Do. 14 do. do.

(*l*) Do. 519 do. do.

(*m*) Excludes Rs. 497 spent on new works in Parlakimedi Maliahs.

(*n*) Excludes Re. 1 spent on repairs in Parlakimedi Maliahs.

Record of demarcation and maintenance of boundaries during 1915-16—*cont.*

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Western Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Mangalore, North * .. | .. | 4 | 1,232 | 1,236 | .. | 103 | 1,339 | .. | 64 |
| Do. South * .. | .. | .. | 1,130 | 1,130 | 46 | 101 | 1,277 | .. | (g) 29<br>(h) — 9 |
| Malabar, North .. | 12 | (b) 102 | 1,000 | 1,174 | 20 | 36 | 1,230 | 935 | .. |
| Do. South .. | .. | (b) 47<br>(b) 15<br>(c) 9 | 60 | 131 | 20 | 55 | 206 | .. | (i) 445<br>(i) 118 |
| The Nilgiris .. .. | 2 | 54 | 1,559 | 1,615 | .. | 299 | 1,914 | 100 | 2,581<br>(j) 148 |
| Kollegal .. .. | 6 | (b) 9<br>(b) 45 | 110 | 170 | (e) 232<br>(e) — 6 | 87 | 483 | 271 | 285 |
| Coimbatore, North .. | (a) 2 | (c) 32<br>(c) 360 | (d) 151<br>(d) — 5 | 540 | 28<br>(a) 2 | (d) 110<br>(d) — 7 | 673 | 45 | 1,202 |
| Do. Central. | .. | .. | 583 | 583 | 13<br>(f) 14 | 44<br>(f) 6 | 660 | .. | (i) 44<br>(g) 64 |
| Do. South .. | .. | (b) 10<br>(c) 104 | 103 | 214 | .. | 52 | 266 | .. | (i) 4 |
| Total .. | 22 | 146<br>(b) 232<br>(c) 470 | 5,923 | 6,793 | 369 | 386 | 8,048 | 1,351 | 4,975 |
| Grand total .. | 118 | 6,206<br>(c) 11,438 | 15,423 | 33,185 | 538 | 1,882 | 35,605 | 4,700 | 16,902 |

* Revised figures furnished by the District Forest Officers with reference to the length given in the Survey of India maps.

(a) Length of revised boundaries caused by disafforestation.
(b) Cleared for fire-protection, the cost being debited to A-viii (f).
(c) Cleared by forest subordinates free of cost.
(d) Length of boundaries of a portion of Velamundi reserved forest disafforested.
(e) Do. of enclosures transferred to reserved forests.
(f) Do. of reserved lands do.
(g) Cost of demarcating coupes and repairs to coupe stones, etc., wrongly debited to A-viii (a).
(h) Cash recovery of service payments.
(i) Cost of construction of cairns, pillars, etc.
(j) Cost of clearing block and compartment lines.

## Annual Form No. 69.

*Forest Department, Madras Presidency*

Progress made in working-plans during 1915–16.

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand | Area for which working-plans are not at present required. | Total forest area as in form No. 65. |
|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | |
| *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Tanjām .. .. | 442 | 182 | .. | .. | .. | .. | 624 |
| Vizagapatam .. | 145 | .. | 28 | .. | 73 | 68 | 314 |
| Gōdāvari, Upper .. | (*d*) 58 | .. | .. | (*e*) 107 | 264 | 352 | 781 |
| Do. Lower .. | 24 | .. | 380 | .. | .. | 75 | 479 |
| Kistna .. .. | 149 | .. | (*b*) .. | .. | .. | 119 | 268 |
| Kurnool, East .. | .. | 147 | 562 | .. | 291 | .. | 1,000 |
| Do. South .. | (*c*) 685 | .. | (*c*) 81 | .. | .. | .. | 766 |
| Do. West .. | 469 | .. | .. | .. | .. | 398 | 867 |
| Total .. | 1,972 | 329 | 1,051 | 107 | 628 | 1,012 | 5,099 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | .. | .. | .. | 89 | 418 | 175 | 682 |
| Anantapur .. | 426 | .. | .. | .. | 326 | .. | 752 |
| Guntūr .. .. | 8 | .. | 164 | 4 | 638 | .. | 814 |
| Cuddapah, West .. | 39 | .. | 17 | 77 | 596 | .. | 729 |
| Do. East .. | (*f*) 157 | 47 | 17 | .. | 863 | .. | 1,084 |
| Nellore .. .. | (*f*) 200 | .. | 19 | 1 | 503 | .. | 723 |
| Chingleput .. | (*f*) 208 | .. | .. | .. | .. | .. | 208 |
| Chittoor .. .. | (*f*) 781 | .. | .. | .. | 50 | .. | 831 |
| Total .. | 1,819 | 47 | 217 | 171 | 3,394 | 175 | 5,823 |
| *Southern Circle..* | | | | | | | |
| North Vellore .. | (*g*) 476 | .. | .. | 2 | .. | .. | 478 |
| South do. .. | (*g*) 713 | 12 | .. | .. | .. | .. | 725 |
| South Arcot . | (*f*) 163 | .. | 132 | .. | 18 | 40 | 353 |
| North Salem .. | 161 | .. | (*h*) 670 | .. | .. | .. | 831 |
| South do. .. | (*i*) 452 | 53 | 73 | .. | 18 | 2 | 598<br>1 |
| Trichinopoly .. | 184 | .. | 26 | .. | 52 | 75 | 337 |
| Madura .. .. | 356 | .. | .. | 3 | 301 | .. | 660 |
| Tinnevelly .. | 246 | .. | .. | .. | 32 | 151 | 429 |
| Total .. | 2,751 | 65 | 901 | 5 | 421 | 268 | 4,412 |
| | | | *Reserved forests.* | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, North. | (*a*) 358 | .. | .. | .. | 4 | .. | 362 |
| Do. South. | (*a*) 436 | .. | .. | .. | .. | .. | 436 |
| Malabar, North .. | 178 | .. | 53 | .. | 32 | .. | 263 |
| Do. South .. | 7 | .. | .. | .. | 95 | 37 | 139 |
| The Nilgiris .. | 107 | .. | .. | .. | 368 | .. | 475 |
| Kollegal .. .. | 53 | .. | 22 | .. | 160 | 495 | 730 |
| Coimbatore, North. | 289 | .. | .. | .. | 627 | .. | 916 |
| Do. Central. | 220 | .. | .. | .. | 54 | 89 | 363 |
| Do. South. | 75<br>(*k*) + 1 | .. | .. | .. | 34 | 317 | 427 |
| Total .. | 1,724 | .. | 75 | .. | 1,374 | 938 | 4,111 |

(*a*) Revised figures furnished by the District Forest officer.
(*b*) The preparation of the working plan for the area noted in column 4 of the previous year was given up.
(*c*) The difference between these and previous years figures is due to slight adjustment in range figures.
(*d*) Area of the Bhadrachellam working-plan.
(*e*) Area of reserved forest in Marrigudem range for which a working-plan is under preparation.
(*d*) and (*e*) Correct figures as per Survey of India Sheets now reported by the District Forest officer.
(*f*) Reduction due to cancellation of portions of working-plans or disafforestation of areas.
(*g*) Fourteen square miles were transferred from North to South Vellore and deduction of 1 square mile in each division was due to the correct computation of area.
(*h*) Difference of 7 square miles due to area excluded at settlement.
(*i*) The 17 miles entered in column 3 of the previous year's return was not added as the area was already covered by a working-plan.
(*j*) The increase of 8 square miles is due to transfer of Tanjore ranger reserves already under working-plan.
(*k*) Wrongly included in column 6 in previous years.

## Progress made in working-plans during 1915-16—*cont.*

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area, as in form No. 65. |
|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | |
| | | | *Reserved lands.* | | | | |
| *Western Circle*—cont. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Malabar, North .. | .. | .. | .. | .. | .. | * | * |
| The Nilgiris .. | .. | .. | .. | .. | 1 | (a) 8 | 9 |
| Kollegal .. .. | .. | .. | .. | .. | .. | * | * |
| Coimbatore, North. | .. | .. | .. | .. | 1 | .. | 1 |
| Do. Central. | .. | .. | .. | .. | .. | 1 | 1 |
| Do. South. | .. | .. | .. | .. | * | .. | * |
| Total .. | .. | .. | .. | .. | 2 | 9 | 11 |
| | | | *Leased forests.* | | | | |
| Malabar, South .. | 24 | .. | .. | .. | .. | .. | 24 |
| The Nilgiris .. | 76 | .. | .. | .. | .. | .. | 76 |
| Coimbatore, South. | .. | .. | .. | .. | 27 | .. | 27 |
| Total .. | 100 | .. | .. | .. | 27 | .. | 127 |
| Grand total .. | 1,824 | .. | 75 | .. | 1,403 | 947 | 4,249 |
| Grand total, Presidency. | 8,366 | 441 | 2,244 | 283 | 5,846 | 2,402 | 19,583 |

* Less than one square mile.

(a) Includes 5 squares miles of toda patta land.

## ANNUAL FORM No. 70.

*Forest Department, Madras Presidency.*

COMMUNICATIONS and Buildings during 1915–16.

| District. | Roads (including bridle-paths and culverts). | | | | Buildings. | | Other works. | |
|---|---|---|---|---|---|---|---|---|
| | New works. | | Repairs. | | Cost of new works. | Cost of repairs. | Cost of new works. | Cost of repairs. |
| | Length. | Cost. | Length. | Cost. | | | | |
| | M. F. CH. | RS. | M. F. CH. | RS. | RS. | RS. | RS. | RS. |
| *Northern Circle.* | | | | | | | | |
| Ganjam .. .. .. | 3 1 0 | 2,523 | 33 6 0 | (a) 1,842<br>(e) + 7 | (f)2,788 | (a) (k)4,073<br>(e) — 6 | 83 | 10<br>(e)+ 1 |
| Vizagapatam .. .. | (b) 9 2 0 | (b) 98 | 12 2 0 | 160<br>(e) + 1 | 322 | 1,210<br>(e) — 10 | .. | .. |
| Godavari, Upper .. | (b) 65 3 0 | (b) 2,804 | .. | .. | 93 | (a) 1,409 | 931 | .. |
| Do. Lower .. | (b) 35 3 0 | 70 | 55 4 3½ | (a) 1,998<br>(e) — 52 | 2,694 | (a) 2,409 | 816 | .. |
| Kistna .. .. .. | 0 5 0 | 1,929 | 14 5 0 | 753 | 381 | (a) 298 | .. | 30 |
| Kurnool, East .. .. | (c) 60 0 0 | 3,578 | 108 6 0 | 7,758 | 4,413 | 1,754 | 557 | 380 |
| Do. South .. .. | .. | .. | 30 5 0 | (d, 5,443 | 1,853 | 716 | 107 | 65 |
| Do. West .. .. | 68 2 3 | 2,244 | 20 0 0 | 127<br>(e)+ 179 | 249 | 2,281<br>(e) — 278 | 78 | 198<br>(e)+ 282 |
| Total .. | 242 0 3 | 13,246 | 275 4 3½ | 18,081<br>(e)+ 135 | 12,793 | 14,150<br>— 294 | 2,572 | 683<br>(e)+ 283 |
| *Central Circle.* | | | | | | | | |
| Bellary .. .. | .. | .. | 34 7 0 | 870 | .. | 865 | .. | 30 |
| Anantapur .. .. | .. | 7 | 5 7 0 | 724 | 451 | 2,302 | 62 | 36 |
| Guntur .. .. | .. | .. | 13 0 0 | 275 | .. | 1,317 | .. | 186 |
| Cuddapah, West .. | 1 4 0 | 446 | 26 1 0 | 1,073 | 1,988 | 853 | 116 | 52 |
| Do. East .. | 36 0 0 | 3,833 | 54 2 0 | 1,455 | 6,439 | 685 | 105 | 185 |
| Nellore .. .. | 40 6 0 | 1,691 | .. | .. | 2,096 | 866 | . | 12 |
| Chingleput .. .. | 0 4 0 | 38 | 16 6 0 | 819 | 863 | 549 | .. | 74 |
| Chittoor .. .. | 6 6 0 | 1,519 | 31 6 0 | 431 | 116 | 3,071 | .. | 8 |
| Total .. | 85 4 0 | 7,534 | 182 5 0 | 5,647 | 11,953 | 10,508 | 283 | 583 |
| *Southern Circle.* | | | | | | | | |
| Vellore, North .. .. | 10 0 0 | 58 | 32 0 0 | 1,104 | 3,868 | 776<br>+ (f) 363 | 384 | 609 |
| Do. South .. .. | 4 0 0 | 206 | 31 0 0 | 1,507 | 5,000 | 847<br>+ (f) 544 | 106 | 39 |
| South Arcot *cum* Tanjore. | 4 0 0 | 293 | .. | | 940 | 462<br>+ (f) 418 | .. | 18 |
| Salem, North .. .. | 4 0 0 | 1,024 | 98 0 0 | 1,502 | 3,404 | 1,968<br>+ (f) 175 | 930 | 153 |
| Do. South .. .. | 16 0 0 | 2,433 | 61 0 0 | 952 | 2,685 | 1,422<br>+ (f) 519 | 2 | 63 |
| Trichinopoly .. .. | .. | .. | 108 0 0 | 1,805 | 470 | 554<br>+ (f) 705 | 52 | 63 |
| Madura .. .. .. | 2 0 0 | 953 | 106 0 0 | 5,488 | 2,151 | 2,468<br>+ (f) 564 | 474 | 188 |
| Tinnevelly .. .. | 2 0 0 | 404 | 30 0 0 | 2,639 | 4,516<br>(g)+ 41 | 2,516<br>+ (f) 416 | 145 | 244<br>(g) — 59 |
| Total .. | 42 0 0 | 5,371 | 456 0 0 | 14,997 | 23,075 | 15,005 | 2,093 | 1,318 |
| *Western Circle.* | | | | | | | | |
| Mangalore, North .. | 0 2 0 | 110 | 3 5 0 | 175 | 3,530 | 165<br>(f) 160 | 54 | 8 |
| Do. South .. | 12 6 0 | 887 | 21 0 0 | 619 | 5,256 | 473 | 19 | 136 |
| Malabar, North .. .. | 17 0 0 | 1,342 | 84 0 0 | 2,513 | 5,875 | 2,559<br>(f) 463 | 275 | 252 |
| Do. South .. .. | 14 4 0 | 1,322 | 80 5 0 | 1,720 | 2,795 | 1,544 | 1,634 | 142 |
| The Nilgiris .. .. | 15 3 0 | 3,335 | 47 3 0 | 3,276 | 2,560 | 1,144 | 733 | 1 |
| Kollegal .. .. .. | .. | .. | 45 6 0 | 3,811 | 1,342 | 1,105<br>(f) 342 | 226 | .. |
| Coimbatore, North .. | 4 0 0 | 4,479 | 95 0 0 | 4,445 | 6,927 | 282<br>(f) 390 | 657 | .. |
| Do. Central .. | .. | (h) 171 | 36 0 0 | 853 | 2,922 | 1,477 | .. | 64 |
| Do. South .. | 7 7 0 | (i) 5,529 | 24 5 0 | 7,947<br>• 316 | 1,692 | 1,671 | 22 | 246 |
| Direction .. .. | .. | . | .. | .. | .. | 121 | .. | .. |
| Total .. | 71 6 0 | (i) 17,175 | 438 0 0 | 25,675 | 32,699 | 11,896 | 3,620 | 844 |
| Grand total, Presidency .. | 441 | 43,326 | 1,352 | 64,535 | 80,720 | 51,265 | 8,568 | 3,711 |

(a) Includes cost of establishment. (b) Includes alignment. (c) Includes foot-paths
(d) Includes the contribution to District Board for maintenance of ghat roads. (e) Variations as per audited figures.
(f) Represents pay of establishment.
(g) Added or subtracted to tally with Accountant-General's audited figure.
(h) Spent on aligning a new road.
(i) Excludes Rs 372 wrongly debited to this head by the Accountant-General.
(j) Excludes Rs. 1,814 spent on the construction of combined range quarters of the Chandragiri range, Parlakimedi Maliahs
(k) Excludes Rs. 40 spent on repairs to the existing buildings in Parlakimedi Maliahs.

## Annual Form No. 71.

*Forest Department, Madras Presidency.*

## Register of Breaches of Forest Rules during 1915–16.

| District. | | Cases pending from 1914–15. | New cases of the year. Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | Total cases. | Disposed of during the year. Convictions. Cases. | Convictions. Persons. | Acquittals. Cases. | Acquittals. Persons. | Total. Cases. | Total. Persons. | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Northern Circle.* | | | | | | | | | | | | | | | |
| Ganjām .. | A .. | 29 | 3 | 71 | 7 | 8 | 89 | 118 | 84 | 296 | 14 | 59 | 98 | 355 | 20 |
| | B .. | 52 | 3 | 331 | 17 | 10 | 361 | 413 | .. | .. | 310 | 1,087 | 310 | 1,087 | 39 |
| | C .. | .. | 56 | 37 | .. | .. | 93 | . | .. | .. | * 64 | 259 | * 64 | 259 | .. |
| | Total .. | (b) 81 | (c) 62 | (d) 439 | (e) 24 | (f)18 | (g)543 | (h)531 | (i) 84 | (j) 296 | (k)324 / * 64 | (l) 1,146 / 259 | (m) 408 / * 64 | (n)1 442 / 259 | (o)59 |
| Vizagapatam. | A .. | 21 | 2 | 91 | 19 | 15 | 127 | 391 | 131 | 336 | 5 | 19 | 136 | 355 | 12 |
| | B .. | 37 | 1 | 268 | 53 | 32 | 354 | 148 | .. | .. | 334 | 816 | 334 | 816 | 25 |
| | C .. | .. | 25 | 1 | .. | .. | 26 | .. | .. | .. | * 32 | 185 | * 32 | 185 | .. |
| | Total .. | 58 | 28 | 360 | 72 | 47 | 507 | 539 | 131 | 336 | 339 / * 32 | 835 / 185 | 470 / * 32 | 1,171 / 185 | 37 |
| Godāvari, Upper. | A .. | 1 | .. | 5 | 1 | .. | 6 | 7 | 3 | 6 | 1 | 2 | 4 | 8 | 3 |
| | B .. | 11 | 2 | 45 | 7 | 16 | 70 | 81 | .. | .. | 50 | 77 | 50 | 77 | 18 |
| | C .. | .. | 43 | .. | .. | .. | 43 | .. | .. | .. | * 13 | 31 | * 13 | 31 | .. |
| | Total .. | 12 | 45 | 50 | 8 | 16 | 119 | 88 | 3 | 6 | 51 / * 13 | 79 / 31 | 54 / * 13 | 85 / 31 | 21 |
| Godāvari, Lower. | A .. | 14 | 2 | 47 | 9 | 7 | 65 | 79 | 31 | 148 | 6 | 34 | 37 | 182 | 42 |
| | B .. | 55 | 1 | 225 | 47 | 46 | 319 | 374 | .. | .. | 278 | 656 | 278 | 656 | 56 |
| | C .. | .. | .. | 3 | .. | .. | 3 | .. | .. | .. | * 40 | 80 | * 40 | 80 | .. |
| | Total .. | 69 | 3 | 275 | 56 | 53 | 387 | 453 | 31 | 148 | 284 / * 40 | 690 / 80 | 315 / * 40 | 838 / 80 | 98 |
| Kistna .. | A .. | 36 | .. | 20 | 46 | 4 | 70 | 106 | 93 | 298 | 5 | 29 | 98 | 327 | 8 |
| | B .. | 42 | .. | 153 | 110 | 6 | 269 | 311 | .. | .. | 216 | 543 | 216 | 543 | 56 |
| | C .. | .. | .. | 18 | 6 | .. | 24 | .. | .. | .. | * 39 | 141 | * 39 | 141 | .. |
| | Total .. | (a) 78 | .. | 191 | 162 | 10 | 363 | 417 | 93 | 298 | 221 / * 39 | 572 / 141 | 314 / * 39 | 870 / 141 | 64 |
| Kurnool, East. | A .. | 31 | .. | 15 | 17 | .. | 32 | 63 | 46 | 147 | 14 | 32 | 60 | 179 | 3 |
| | B .. | 50 | 3 | 235 | 128 | 4 | 370 | 420 | .. | .. | 349 | 720 | 349 | 720 | 38 |
| | C .. | .. | .. | 10 | 1 | .. | 11 | .. | .. | .. | * 33 | 118 | * 33 | 118 | .. |
| | Total .. | 81 | 3 | 260 | 146 | 4 | 413 | 483 | 46 | 147 | 363 / * 33 | 752 / 118 | 409 / * 33 | 899 / 118 | 41 |
| Kurnool, South. | A .. | 34 | 2 | 109 | 11 | 3 | 125 | 159 | 126 | 321 | 9 | 19 | 135 | 340 | 24 |
| | B .. | 26 | .. | 297 | 121 | 8 | 426 | 452 | .. | .. | 352 | 623 | 352 | 623 | 50 |
| | C .. | .. | 23 | 71 | 10 | .. | 104 | .. | .. | .. | * 50 | 163 | * 50 | 163 | .. |
| | Total . | 60 | 25 | 477 | 142 | 11 | 655 | 611 | 126 | 321 | 361 / * 50 | 642 / 163 | 487 / * 50 | 963 / 163 | 74 |
| Kurnool, West. | A .. | 60 | 1 | 113 | 38 | 15 | 167 | 227 | 208 | 623 | 10 | 91 | 218 | 714 | 9 |
| | B .. | 55 | .. | 423 | 129 | 10 | 562 | 617 | .. | .. | 521 | 1,555 | 521 | 1,555 | 43 |
| | C .. | .. | 69 | 66 | 4 | .. | 139 | .. | .. | .. | * 53 | 232 | * 53 | 232 | .. |
| | Total .. | 115 | 70 | 602 | 171 | 25 | 868 | 844 | 208 | 623 | 531 / * 53 | 1,646 / 232 | 739 / * 53 | 2,269 / 232 | 52 |
| Total, Northern Circle. | A .. | 226 | 10 | 471 | 148 | 52 | 681 | 907 | 722 | 2,175 | 64 | 285 | 786 | 2,460 | 121 |
| | B .. | 328 | 10 | 1,977 | 612 | 132 | 2,731 | 3,059 | .. | .. | 2,410 | 6,077 | 2,410 | 6,077 | 325 |
| | C .. | .. | 216 | 206 | 21 | .. | 443 | .. | .. | .. | * 324 | 1,209 | * 324 | 1,209 | .. |
| Grand Total, Northern Circle. | | 554 | 236 | 2,654 | 781 | 184 | 3,855 | 3,966 | 722 | 2,175 | 2,474 / * 324 | 6,362 / 1,209 | 3,196 / * 324 | 8,537 / 1,209 | 446 |

A = Cases taken into Court. B = Cases compounded by the District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

*Note.*—Northern Circle.—Variations between the closing balance of 1914-15 and the opening balance of 1915-16 are due to transfer of cases between A and B.

(a) Correct figure adopted as reported by the District Forest Officer.
(b) Excludes 76 cases belonging to Parlākimedi Maliahs.
(c) Do. 5 do. do.
(d) Do. 260 do. do.
(e) Do 24 do. do.
(f) Do. 13 do. do.
(g) Do. 302 do. do.
(h) Do. 378 do. do.
(i) Do. 222 cases taken to Court in do.
(j) Excludes 567 persons concerned in 222 cases belonging to Parlākimedi Maliahs.
(k) Excludes 59 cases compounded in Parlākimedi Maliahs.
(l) Do. 181 persons involved in the 59 compounded cases in Parlākimedi Maliahs.
(m) Excludes 281 disposed of cases in Parlākimedi Maliahs.
(n) Do. 748 persons involved in 281 cases in Parlākimedi Maliahs.
(o) Do. 97 pending cases in Parlākimedi Maliahs.

## Register of Breaches of Forest Rules during 1915-16—*cont.*

| District. | | Cases pending from 1914-15. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Central Circle.* | | | | | | | | | | | | | | | |
| Bellary | A | 9 | 4 | 131 | 125 | 34 | 294 | 303 | 268 | 625 | 18 | 66 | 286 | 691 | 17 |
| | B | 152 | 1 | 387 | 474 | 33 | 895 | 1,047 | .. | .. | 827 | 1,980 | 827 | 1,980 | 131 |
| | | | | | | | | | | | | | * 89 | 268 | |
| | C | .. | .. | .. | 56 | .. | 56 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 161 | 5 | 518 | 655 | 67 | 1,245 | 1,350 | 268 | 625 | 845 | 2,046 | 1,113 | 2,671 | 148 |
| | | | | | | | | | | | | | * 89 | 268 | |
| Anantapur. | A | 129 | .. | 133 | 78 | 12 | 223 | 352 | 233 | 477 | 89 | 257 | 322 | 734 | 30 |
| | B | 88 | 1 | 591 | 213 | 23 | 828 | 916 | .. | .. | 730 | 1,769 | 730 | 1,769 | 186 |
| | C | .. | 135 | 49 | 263 | .. | 447 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 217 | 136 | 773 | 554 | 35 | 1,498 | 1,268 | 233 | 477 | 819 | 2,026 | 1,052 | 2,503 | 216 |
| Guntur | A | 188 | .. | 201 | 295 | 13 | 509 | 697 | 473 | 2,079 | 25 | 118 | 498 | 2,197 | 199 |
| | B | 350 | .. | 481 | 782 | 14 | 1,277 | 1,627 | .. | .. | 1,314 | 3,825 | 1,314 | 3,825 | 208 |
| | | | | | | | | | | | | | * 105 | 419 | |
| | C | .. | .. | 81 | 9 | .. | 90 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 538 | .. | 763 | 1,086 | 27 | 1,876 | 2,324 | 473 | 2,079 | 1,339 | 3,943 | 1,812 | 6,022 | 407 |
| | | | | | | | | | | | | | * 105 | 419 | |
| Cuddapah, West. | A | (a) 174 | 7 | 134 | 155 | 19 | 315 | 489 | 428 | 821 | 28 | 58 | 456 | 879 | 33 |
| | B | (a) 75 | .. | 277 | 187 | 36 | 500 | 575 | .. | .. | 445 | 1,160 | 445 | 1,160 | 90 |
| | | | | | | | | | | | | | * 40 | 119 | |
| | C | .. | .. | 2 | 8 | .. | 10 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 249 | 7 | 413 | 350 | 55 | 825 | 1,064 | 428 | 821 | 473 | 1,218 | 901 | 2,039 | 123 |
| | | | | | | | | | | | | | * 40 | 119 | |
| Cuddapah, East. | A | (a) 49 | 6 | 82 | 39 | 4 | 131 | 180 | 155 | 377 | 17 | 27 | 172 | 404 | 8 |
| | B | (a) 92 | 2 | 507 | 192 | 7 | 708 | 800 | .. | .. | 662 | 1,569 | 662 | 1,569 | 92 |
| | | | | | | | | | | | | | * 46 | 111 | |
| | C | .. | .. | 3 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 141 | 8 | 592 | 231 | 11 | 842 | 980 | 155 | 377 | 679 | 1,596 | 834 | 1,973 | 100 |
| | | | | | | | | | | | | | * 46 | 111 | |
| Nellore | A | (a) 124 | 1 | 110 | 243 | 1 | 355 | 479 | 294 | 607 | 48 | 268 | 342 | 875 | 137 |
| | B | (a) 266 | 1 | 459 | 368 | 5 | 833 | 1,099 | .. | .. | 905 | 1,713 | 905 | 1,713 | 194 |
| | C | .. | 2 | 18 | 87 | 1 | 108 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 390 | 4 | 587 | 698 | 7 | 1,296 | 1,578 | 294 | 607 | 953 | 1,981 | 1,247 | 2,588 | 331 |
| Chingleput. | A | (a) 60 | 1 | 218 | 93 | 7 | 319 | 379 | 205 | 557 | .. | .. | 205 | 557 | 174 |
| | B | (a) 95 | .. | 529 | 260 | 13 | 802 | 897 | .. | .. | 859 | 1,626 | 859 | 1,626 | 7 |
| | | | | | | | | | | | | | * 31 | 78 | |
| | C | .. | 9 | .. | .. | .. | 9 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 155 | 10 | 747 | 353 | 20 | 1,130 | 1,276 | 205 | 557 | 859 | 1,626 | 1,064 | 2,183 | 181 |
| | | | | | | | | | | | | | * 31 | 78 | |
| Chittoor | A | 21 | 1 | 73 | 58 | 8 | 140 | 161 | 138 | 325 | 19 | 54 | 157 | 379 | 4 |
| | B | 146 | .. | 582 | 361 | 18 | 961 | 1,107 | .. | .. | 915 | 1,287 | 915 | 1,287 | 92 |
| | | | | | | | | | | | | | * 100 | 228 | |
| | C | .. | 161 | .. | .. | .. | 161 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 167 | 162 | 655 | 419 | 26 | 1,262 | 1,268 | 138 | 325 | 934 | 1,341 | 1,072 | 1,666 | 96 |
| | | | | | | | | | | | | | * 100 | 228 | |
| Total, Central Circle. | A | (a) 754 | 20 | 1,082 | 1,086 | 98 | 2,286 | 3,040 | 2,194 | 5,868 | 244 | 848 | 2,438 | 6,716 | 602 |
| | B | (a) 1,264 | 5 | 3,813 | 2,837 | 149 | 6,804 | 8,068 | .. | .. | 6,657 | 14,929 | 6,657 | 14,929 | 1,000 |
| | | | | | | | | | | | * 411 | 1,223 | * 411 | 1,223 | |
| | C | .. | 307 | 153 | 423 | 1 | 884 | .. | .. | .. | .. | .. | .. | .. | .. |
| Central Circle Grand Total. | | 2,018 | 332 | 5,048 | 4,346 | 248 | 9,974 | 11,108 | 2,194 | 5,868 | 6,901 | 15,777 | 9,095 | 21,645 | 1,602 |
| | | | | | | | | | | | * 411 | 1,223 | * 411 | 1,223 | |

A = Cases taken into Court. B = Cases compounded by the District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

(a) Variations between the closing balance of 1914-15 and the opening balance of 1915-16 are due to transfer of cases between A and B.

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

## Register of Breaches of Forest Rules during 1915-16—*cont.*

| District. | | Cases pending from 1914-15. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Southern Circle.* | | | | | | | | | | | | | | | |
| Vellore. | A .. | 74—26 | 1 | 324 | 162 | 6 | 493 | 541 | 384 | 961 | 9 | 25 | 393<br>* 1 | 986<br>3 | 147 |
| | B .. | 226+26 | .. | 697 | 259 | 4 | 960 | 1,212 | .. | .. | 1,122 | 2,165 | 1,122<br>* 58 | 2,165<br>140 | 32 |
| | C .. | .. | 86 | 1 | 29 | .. | 116 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 300 | 87 | 1,022 | 450 | 10 | 1,569 | 1,753 | 384 | 961 | 1,131 | 2,190 | 1,515<br>* 59 | 3,151<br>143 | 179 |
| South Vellore | A .. | 118+82 | .. | 223 | 31 | 5 | 259 | 459 | 344 | 829 | 23 | 60 | 367<br>* 16 | 889<br>39 | 76 |
| | B .. | 238—82 | .. | 854 | 215 | 9 | 1,078 | 1,234 | .. | .. | 1,081 | 2,378 | 1,081<br>* 36 | 2,378<br>129 | 117 |
| | C .. | .. | 166 | 4 | .. | .. | 170 | | .. | .. | .. | .. | .. | .. | .. |
| Total | . | 356 | 166 | 1,081 | 246 | 14 | 1,507 | 1,693 | 344 | 829 | 1,104 | 2,438 | 1,448<br>* 52 | 3,267<br>168 | 193 |
| South Arcot. | A .. | 75+262 | .. | 644 | 131 | 13 | 788 | 1,125 | 870 | 2,075 | 80 | 459 | 950<br>* 16 | 2,534<br>20 | 159 |
| | B .. | 440—146 | .. | 1,865 | 286 | 27 | 2,178 | 2,472 | .. | .. | 1,780 | 2,788 | 1,780<br>* 109 | 2,788<br>207 | 583 |
| | C . | | 7 | 49 | 2 | .. | 58 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | | 631<br>515+116(*a*) | 7 | 2,558 | 419 | 40 | 3,024 | 3,597 | 870 | 2,075 | 1,860 | 3,247 | 2,730<br>* 125 | 5,322<br>227 | 742 |
| North Salem. | A .. | 19+72 | 1 | 275 | 62 | 16 | 351 | 445 | 390 | 762 | 20 | 48 | 410 | 810 | 35 |
| | B .. | 270—72 | .. | 926 | 274 | 71 | 1,271 | 1,469 | .. | .. | 1,111 | 1,769 | 1,111<br>* 110 | 1,769<br>256 | 248 |
| | C .. | .. | 131 | 5 | 2 | .. | 138 | .. | | .. | .. | .. | .. | .. | .. |
| Total | .. | 289 | 132 | 1,206 | 338 | 87 | 1,763 | 1,914 | 390 | 762 | 1,131 | 1,817 | 1,521<br>* 110 | 2,579<br>256 | 283 |
| South Salem. | A .. | 112+21 | 6 | 205 | 35 | 25 | 271 | 404 | 317 | 1,313 | 7 | 34 | 324 | 1,347 | 80 |
| | B .. | 171—21 | .. | 650 | 113 | 32 | 795 | 945 | .. | .. | 588 | 1,668 | 588<br>* 52 | 1,668<br>187 | 305 |
| | C .. | . | 102 | 14 | 9 | .. | 125 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 283 | 108 | 869 | 157 | 57 | 1,191 | 1,349 | 317 | 1,313 | 595 | 1,702 | 912<br>* 52 | 3,015<br>187 | 385 |
| Trichinopoly. | A .. | 34+125 | 2 | 345 | 31 | 6 | 384 | 543 | 469 | 903 | 21 | 90 | 490<br>* 9 | 993<br>53 | 44 |
| | B .. | 386—125 | 2 | 835 | 153 | 17 | 1,007 | 1,268 | .. | .. | 839 | 1,193 | 839<br>* 36 | 1,193<br>87 | 393 |
| | C .. | .. | .. | 30 | 1 | .. | 31 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | | 420<br>536—116(*a*) and (*b*) | 4 | 1,210 | 185 | 23 | 1,422 | 1,811 | 469 | 903 | 860 | 1,283 | 1,329<br>* 45 | 2,186<br>140 | 437 |
| Madura | A .. | 128+336 | 9 | 898 | 174 | 24 | 1,105 | 1,569 | 969 | 3,801 | 41 | 161 | 1,010<br>* 17 | 3,962<br>73 | 542 |
| | B .. | 446—336 | .. | 587 | 149 | 21 | 757 | 867 | .. | .. | 601 | 1,264 | 601<br>* 60 | 1,264<br>105 | 206 |
| | C .. | .. | 132 | 10 | .. | .. | 142 | | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 574 | 141 | 1,495 | 323 | 45 | 2,004 | 2,436 | 969 | 3,801 | 642 | 1,425 | 1,611<br>* 77 | 5,226<br>178 | 748 |
| Tinnevelly. | A .. | 15 | 2 | 156 | 50 | 10 | 218 | 233 | 205 | 466 | (*b*) 9 | 29 | 214 | 495 | 19 |
| | B . | 118 | 2 | 498 | 253 | 32 | 785 | 903 | .. | .. | 776 | 1,583 | 776 | 1,583 | 127 |
| | C .. | .. | 6 | 7 | .. | .. | 13 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 133 | 10 | 661 | 303 | 42 | 1,016 | 1,136 | 205 | 466 | 785 | 1,612 | 990 | 2,078 | 146 |
| Total, Southern Circle. | A .. | 1,447 | 21 | 3,070 | 676 | 105 | 3,872 | 5,319 | 3,948 | 11,110 | 210<br>* 59 | 906<br>188 | 4,158<br>* 59 | 12,016<br>188 | 1,102 |
| | B .. | 1,539 | 4 | 6,912 | 1,702 | 213 | 8,831 | 10,570 | .. | .. | 7,898<br>* 461 | 14,808<br>1,111 | 7,898<br>* 461 | 14,808<br>1,111 | 2,011 |
| | C .. | .. | 630 | 120 | 43 | .. | 793 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Southern Circle. | | 2,986 | 655 | 10,102 | 2,421 | 318 | 13,496 | 15,689 | 3,948 | 11,110 | 8,108<br>* 520 | 15,714<br>1,299 | 12,056<br>* 520 | 26,824<br>1,299 | 3,113 |

A = Cases taken to Court. B = Cases compounded. C = Cases undetected.

(*a*) Represents transfer from Trichinopoly to South Arcot on account of Tanjore district. * Cases withdrawn.

(*b*) Corrected in the Board's office.

*Note.*—Alterations in column 2 represent transfers between A and B.

## Register of Breaches of Forest Rules during 1915–16—*cont.*

| District. | | Cases pending from 1914–15. | New cases of the year. Injury to forests by fire. | Unauthorized felling or appropriation of wood and minor forest produce. | Grazing without permission or in tracts in which grazing is prohibited. | Other offences. | Total new cases of the year. | Total cases. | Disposed of during the year. Convictions. Cases. | Convictions. Persons. | Acquittals. Cases. | Acquittals. Persons. | Total. Cases. | Total. Persons. | Cases pending at close of the year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Western Circle.* | | | | | | | | | | | | | | | |
| Mangalore, North. | A | (a) 15 | 3 | 17 | 3 | 8 | 31 | 46 | 33 | 95 | 3 | 7 | 36 | 102 | 10 |
| | B | (a) 145 | 1 | 634 | 82 | 65 | 782 | 927 | .. | .. | 795 | 1,492 | 795 | 1,492 | 61 |
| | C | .. | 35 | .. | .. | .. | 35 | .. | .. | .. | .. | .. | * 71 | 139 | .. |
| | Total | 160 | 39 | 651 | 85 | 73 | 848 | 973 | 33 | 95 | 798 | 1,499 | 831 | 1,594 | 71 |
| | | | | | | | | | | | | | * 71 | 139 | |
| Mangalore, South. | A | (a) 2 | 17 | 62 | 12 | 17 | 108 | 110 | 48 | 91 | 27 | 78 | 75 | 169 | 35 |
| | B | (a) 116 | 16 | 269 | 54 | 20 | 359 | 475 | .. | .. | 380 | 756 | 380 | 756 | 55 |
| | C | .. | 32 | .. | .. | .. | 32 | .. | .. | .. | .. | .. | * 40 | 70 | .. |
| | Total | 118 | 65 | 331 | 66 | 37 | 499 | 585 | 48 | 91 | 407 | 834 | 455 | 925 | 90 |
| | | | | | | | | | | | | | * 40 | 70 | |
| Malabar, North. | A | 1 | 1 | .. | .. | | 1 | 2 | 1 | 4 | .. | .. | 1 | 4 | 1 |
| | B | 8 | 1 | 24 | 1 | 1 | 27 | 35 | .. | .. | 30 | 32 | 30 | 32 | 2 |
| | C | .. | 11 | .. | .. | . | 11 | .. | . | .. | .. | .. | * 3 | 11 | .. |
| | Total | 9 | 13 | 24 | 1 | 1 | 39 | 37 | 1 | 4 | 30 | 32 | 31 | 36 | 3 |
| | | | | | | | | | | | | | * 3 | 11 | |
| Malabar, South. | A | 2 | .. | 1 | .. | 3 | 4 | 6 | 5 | 8 | .. | .. | 5 | 8 | .. |
| | B | .. | .. | 7 | 10 | 13 | 30 | 30 | .. | .. | 27 | 42 | * 1 | 2 | 2 |
| | C | .. | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 27 | 42 | .. |
| | Total | 2 | 3 | 8 | 10 | 16 | 37 | 36 | 5 | 8 | 27 | 42 | * 1 | 2 | 2 |
| | | | | | | | | | | | | | 32 | 50 | |
| | | | | | | | | | | | | | * 2 | 4 | |
| The Nilgiris. | A | (a) 26 | 6 | 49 | 41 | 18 | 114 | 140 | 112 | 306 | 5 | 10 | 117 | 316 | 23 |
| | B | (a) 26 | 5 | 97 | 101 | 9 | 212 | 238 | .. | .. | 165 | 443 | 165 | 443 | 33 |
| | C | .. | 24 | .. | 9 | .. | 33 | .. | .. | .. | .. | .. | * 40 | 84 | .. |
| | Total | 52 | 35 | 146 | 151 | 27 | 359 | 378 | 112 | 306 | 170 | 453 | 282 | 759 | 56 |
| | | | | | | | | | | | | | * 40 | 84 | |
| Kollegal. | A | 6 | .. | 21 | 17 | 11 | 49 | 55 | 37 | 84 | 11 | 38 | 48 | 122 | 7 |
| | B | 27 | .. | 74 | 34 | 2 | 110 | 137 | .. | .. | 110 | 155 | 110 | 155 | 22 |
| | C | .. | 26 | 6 | 4 | 2 | 38 | .. | .. | .. | .. | .. | * 5 | 11 | .. |
| | Total | 33 | 26 | 101 | 55 | 15 | 197 | 192 | 37 | 84 | 121 | 193 | 158 | 277 | 29 |
| | | | | | | | | | | | | | * 5 | 11 | |
| Coimbatore, North. | A | 40 | 3 | 84 | 30 | 4 | 121 | 161 | 118 | 265 | 7 | 10 | 125 | 275 | 36 |
| | B | 59 | .. | 339 | 107 | 4 | 450 | 509 | .. | .. | 438 | 806 | 438 | 806 | 42 |
| | C | .. | 216 | .. | .. | .. | 216 | .. | .. | .. | .. | .. | * 29 | 85 | .. |
| | Total | 99 | 219 | 423 | 137 | 8 | 787 | 670 | 118 | 265 | 445 | 816 | 563 | 1,081 | 78 |
| | | | | | | | | | | | | | * 29 | 85 | |
| Coimbatore, Central. | A | (a) 81 | 10 | 121 | 27 | 19 | 177 | 258 | 178 | 562 | 11 | 34 | 189 | 596 | 56 |
| | B | (a) 27 | 2 | 102 | 63 | 44 | 211 | 238 | .. | .. | 211 | 504 | * 13 | 28 | 27 |
| | C | .. | 71 | 9 | .. | 1 | 81 | .. | .. | .. | .. | .. | 211 | 504 | .. |
| | Total | 108 | 83 | 232 | 90 | 64 | 469 | 496 | 178 | 562 | 222 | 538 | 400 | 1,100 | 83 |
| | | | | | | | | | | | | | * 13 | 28 | |
| Coimbatore, South. | A | (a) 32 | 1 | 55 | 12 | 6 | 74 | 106 | 78 | 203 | 5 | 11 | 83 | 214 | 23 |
| | B | (a) 27 | .. | 153 | 31 | 9 | 193 | 220 | .. | .. | 185 | 458 | 185 | 458 | 35 |
| | C | .. | 38 | 10 | 5 | 5 | 58 | . | .. | .. | .. | .. | .. | .. | .. |
| | Total | 59 | 39 | 218 | 48 | 20 | 325 | 326 | 78 | 203 | 190 | 469 | 268 | 672 | 58 |
| Total, Western Circle. | A | 205 | 41 | 410 | 142 | 86 | 679 | 884 | 610 | 1,618 | 69 | 188 | 679 | 1,806 | 191 |
| | | | | | | | | | | | * 14 | 30 | * 14 | 30 | |
| | B | 435 | 25 | 1,699 | 483 | 167 | 2,374 | 2,809 | .. | .. | 2,341 | 4,688 | 2,341 | 4,688 | 279 |
| | | | | | | | | | | | * 189 | 402 | * 189 | 402 | |
| | C | .. | 456 | 25 | 18 | 8 | 507 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Western Circle. | | 640 | 522 | 2,134 | 643 | 261 | 3,560 | 3,693 | 610 | 1,618 | 2,410 | 4,878 | 3,020 | 6,494 | 470 |
| | | | | | | | | | | | * 203 | 432 | * 203 | 432 | |
| Total, Presidency. | A | 2,632 | 92 | 5,033 | 2,052 | 341 | 7,518 | 10,150 | 7,474 | 20,771 | 587 | 2,227 | 8,061 | 22,998 | 2,016 |
| | | | | | | | | | | | * 73 | 218 | * 73 | 218 | |
| | B | 3,566 | 44 | 14,401 | 5,634 | 661 | 20,740 | 24,306 | .. | .. | 19,306 | 40,502 | 19,306 | 40,502 | 3,615 |
| | | | | | | | | | | | 1,385 | 3,945 | * 1,385 | 3,945 | |
| | C | .. | 1,609 | 504 | 505 | 9 | 2,627 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Presidency. | | 6,198 | 1,745 | 19,938 | 8,191 | 1,011 | 30,885 | 34,456 | 7,474 | 20,771 | 19,893 | 42,729 | 27,367 | 63,500 | 5,631 |
| | | | | | | | | | | | *1,458 | 4,163 | * 1,458 | * 4,163 | |

A = Cases taken into Court. B = Cases compounded. C = Cases undetected.

(a) The variations between the closing balance of 1914–15 and these figures are due to transfers between heads A and B.

* Withdrawn under the orders of the District Forest or Revenue Divisional Officer.

## Annual Form No. 72.

*Forest Department, Madras Presidency.*

Area of forest tracts protected from fire during 1915–16.

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Northern Circle.* | Acs. | Acs. | Acs. | Acs. | Rs. |
| Ganjam .. | Special protection .. | 102,407 | 86,077 | 846 | 85,231 | 3,809 |
| | General do. .. | 37,494 | 172,159 | 17,276 | 154,883 | 1,211 |
| | Total, Ganjam .. | (*a*) 139,901 | (*e*) 258,236 | (*f*) 18,122 | (*g*) 240,114 | (*h*) 5,020 |
| Vizagapatam. | Special protection .. | 64,871 | 68,804 | 182 | 68,622 | 1,451 |
| | General do. .. | 114,471 | 113,783 | 4,862 | 108,921 | 162 |
| | Total, Vizagapatam .. | 179,342 | 182,587 | 5,044 | 177,543 | 1,613 |
| Godavari, Upper. | Special protection .. | 468,814 | 533,907 | 134,138 | 399,769 | 7,910* |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total, Godavari, Upper .. | 468,814 | 533,907 | 134,138 | 399,769 | 7,910 |
| Godavari, Lower. | Special protection .. | .. | .. | .. | .. | .. |
| | General do. .. | 239,539 | 240,870 | 7,676 | 233,194 | 5,035 |
| | Total, Godavari, Lower .. | 239,539 | 240,870 | 7,676 | 233,194 | 5,035 |
| Kistna .. | Special protection .. | 56,977 | 46,033 | 2,954 | 43,079 | 1,430 |
| | General do. .. | 3,219 | 1,609 | | 1,609 | .. |
| | Total, Kistna .. | 60,196 | 47,642 | 2,954 | 44,688 | 1,430 |
| Kurnool, East. | Special protection .. | 136,091 | 201,516 | 99,124 | 102,392 | 11,332 |
| | General do. .. | 487,328 | 438,786 | 1,743 | 437,043 | .. |
| | Total, Kurnool, East .. | 623,419 | 640,302 | 100,867 | 539,435 | 11,332 |
| Kurnool, South. | Special protection .. | (*a*) 283,857 | 362,070 | 98,065 | 264,005 | 11,660 |
| | General do. .. | (*a*) 123,764 | 128,384 | 2,377 | 126,007 | .. |
| | Total, Kurnool, South .. | 407,621 | 490,454 | 100,442 | 390,012 | 11,660 |
| Kurnool, West. | Special protection .. | (*b*) 140,715 | 146,635 | 42,474 | 104,161 | 13,442 |
| | General do. .. | (*b*) 366,972 | 408,436 | 41,800 | 366,636 | .. |
| | Total, Kurnool, West .. | 507,687 | 555,071 | (*c*) 84,274 | (*c*) 470,797 | 13,442 |
| Total .. | Special protection .. | 1,253,732 | 1,445,042 | 377,783 | 1,067,259 | 51,034 |
| | General do. .. | 1,372,787 | 1,504,027 | 75,734 | 1,428,293 | 6,408 |
| | Grand total .. | 2,626,519 | 2,949,069 | (*c*) 453,517 | (*c*) 2,495,552 | 57,442 |
| | *Central Circle.* | | | | | |
| Bellary .. | Special protection .. | 90,318 | 74,755 | 30,113 | 44,642 | 3,909 |
| | General do. .. | 719 | 796 | .. | 796 | .. |
| | Total .. | 91,037 | 75,551 | 30,113 | 45,438 | 3,909 |
| Anantapur .. | Special protection .. | 410,334 | 415,679 | 54,978 | 360,701 | 5,057 |
| | General do. .. | 52,422 | 52,460 | 6,648 | 45,812 | .. |
| | Total .. | 462,756 | 468,139 | 61,626 | 406,513 | 5,057 |
| Guntur .. | Special protection .. | 13,284 | 13,334 | 50 | 13,284 | 15 |
| | General do. .. | 21,201 | 21,203 | 219 | 20,984 | .. |
| | Total .. | 34,485 | 34,537 | 269 | 34,268 | 15 |
| Cuddapah, West. | Special protection .. | 199,701 | 248,957 | 31,735 | 217,222 | 3,674 |
| | General do. .. | 83,128 | 104,984 | 5,150 | 99,834 | 716 |
| | Total .. | 282,829 | 353,941 | 36,885 | 317,056 | 4,390 |
| Cuddapah, East. | Special protection .. | 93,329 | 378,647 | 88,899 | 289,748 | 4,966 |
| | General do. .. | 260,458 | 152,180 | 26,874 | 125,306 | 622 |
| | Total .. | 353,787 | 530,827 | 115,773 | 415,054 | 5,588 |
| Nellore .. | Special protection .. | 128,507 | 131,403 | 5,981 | 125,422 | 1,230 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 128,507 | 131,403 | 5,981 | 125,422 | 1,230 |

* Represents rewards for results of 1914–15.

(*a*) The difference between closing balance of the previous year and the opening balance of the year under report is due to transfer of 27,922 acres from general to special protection.
(*b*) Correct figure now reported.
(*c*) Corrected in the Board's office.
(*d*) Excludes 90,417 acres under general protection in the Parlakimedi Maliahs.
(*e*) Do. 114,053 do. do.
(*f*) Do. 14,864 burnt in the Parlakimedi Maliahs.
(*g*) Do. 99,189 acres actually protected in the Parlakimedi Maliahs.
(*h*) Do. Rs. 484 spent on fire protection in the Parlakimedi Maliahs.

## Area of forest tracts protected from fire during 1915-16—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Central Circle*—cont. | ACS. | ACS. | ACS. | ACS. | RS. |
| Chingleput.. | Special protection .. | 25,505 | 25,540 | 151 | 25,389 | 942 |
| | General do. . | 107,602 | 107,542 | 100 | 107,442 | .. |
| | Total .. | 133,107 | 133,082 | 251 | 132,831 | 942 |
| Chittoor .. | Special protection .. | 135,815 | 132,882 | 11,567 | 121,315 | 1,249 |
| | General do. .. | 332,215 | 403,270 | 16,471 | 386,799 | .. |
| | Total .. | 468,030 | 536,152 | 28,038 | 508,114 | 1,249 |
| Total .. | Special protection .. | 1,096,793 | 1,421,197 | 223,474 | 1,197,723 | 21,042 |
| | General do. .. | 857,745 | 842,435 | 55,462 | 786,973 | 1,338 |
| | Total .. | 1,954,538 | 2,263,632 | 278,936 | 1,984,696 | 22,380 |
| | *Southern Circle.* | | | | | |
| Vellore, North. | Special protection .. | 49,864 | 35,116 | 3,532 | 31,584 | 649 |
| | General do. .. | 278,293 | 269,677 | 9,940 | 259,737 | .. |
| | Total .. | 328,157 | 304,793 | 13,472 | 291,321 | 649 |
| Vellore, South. | Special protection .. | 122,215 | 116,046 | 16,291 | 99,755 | 455 |
| | General do. .. | 321,022 | 328,906 | 20,779 | 308,127 | .. |
| | Total .. | 443,237 | 444,952 | 37,070 | 407,882 | 455 |
| South Arcot. *cum* Tanjore | Special protection .. | 13,541 | 13,541 | 5 | 13,536 | 139 |
| | General do. .. | 201,272 | 212,127 | 116 | 212,011 | .. |
| | Total .. | 214,813 | 225,668 | 121 | 225,547 | 139 |
| Salem, North | Special protection .. | 62,196 | 61,738 | 8,916 | 52,822 | 3,487 |
| | General do. .. | 469,566 | 470,446 | 9,867 | 460,579 | |
| | Total .. | 531,762 | 532,184 | 18,783 | 513,401 | 3,437 |
| Salem, South | Special protection .. | 216,887 | 211,731 | 14,888 | 196,843 | 1,755 |
| | General do. .. | 154,105 | 167,085 | 2,140 | 164,945 | .. |
| | Total .. | 370,992 | 378,816 | 17,028 | 361,788 | 1,755 |
| Trichinopoly. | Special protection .. | 22,093 | 88,355 | 483 | 87,872 | 503 |
| | General do. .. | 81,596 | 117,993 | 23 | 117,970 | .. |
| | Total .. | 103,689 | 206,348 | 506 | 205,842 | 503 |
| Madura .. | Special protection .. | 125,918 | 178,573 | 12,462 | 166,111 | 5,181 |
| | General do. .. | 288,850 | 239,595 | 10,847 | 228,748 | .. |
| | Total .. | 414,768 | 418,168 | 23,309 | 394,859 | 5,181 |
| Tinnevelly | Special protection .. | 30,266 | 35,377 | 1,277 | 34,100 | 5,100 |
| | General do. .. | 204,392 | 206,712 | 5,733 | 200,979 | .. |
| | Total .. | 234,658 | 242,089 | 7,010 | 235,079 | 5,100 |
| | Total, Special protection. | 642,980 | 740,477 | 57,854 | 682,623 | 17,219 |
| | Total, General protection. | 1,999,096 | 2,012,541 | 59,445 | 1,953,096 | .. |
| | Grand total (Special and General) Protection. | 2,642,076 | 2,753,018 | 117,299 | 2,635,719 | 17,219 |
| Mangalore, North. | Special protection .. | 35,120 | 39,388 | 415 | 38,973 | 1,168 |
| | General do. .. | 195,830 | 192,659 | 879 | 191,780 | 621 |
| | Total .. | 230,950 | 232,047 | 1,294 | 230,753 | 1,789 |
| Mangalore, South. | Special protection .. | 106,927 | 107,341 | 856 | 106,485 | 1,208 |
| | General do. .. | 171,063 | 171,451 | 1,046 | 170,405 | †+218 984 |
| | Total .. | 277,990 | 278,792 | 1,902 | 276,890 | 2,405 |
| Malabar, North. | Special protection .. | 139,040 | 139,089 | 4,410 | 134,679 | 7,054 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 139,040 | 139,089 | 4,410 | 134,679 | 7,054 |

† Fire tracing—South Canara-Mysore boundary.

## Area of forest tracts protected from fire during 1915-16—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Western Circle.* | ACS. | ACS. | ACS. | ACS. | RS. |
| Malabar, South. | Special protection .. | 82,107 | 82,117 | 1,748 | 80,369 | 2,675 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 82,107 | 82,117 | 1,748 | 80,369 | 2,675 |
| The Nilgiris. | Special protection .. | 74,353 | 74,530 | 11,263 | 63,267 | 3,903 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 74,353 | 74,530 | 11,263 | 63,267 | 3,903 |
| Kollegal .. | Special protection .. | 64,390 | 67,717 | 2,009 | 65,708 | 3,131 |
| | General do. .. | 392,459 | 399,490 | 36,294 | 363,196 | .. |
| | Total .. | 456,849 | 467,207 | 38,303 | 428,904 | 3,131 |
| Coimbatore, North. | Special protection .. | 71,634 | 72,484 | 48,114 | 24,370 | 3,313 |
| | General do. .. | 509,263 | 513,688 | 214,656 | 299,032 | .. |
| | Total .. | 580,897 | 586,172 | 262,770 | 323,402 | 3,313 |
| Coimbatore, Central. | Special protection .. | 104,975 | 91,703 | 6,319 | 85,384 | 2,455 |
| | General do. .. | 120,730 | 140,627 | 4,246 | 136,381 | .. |
| | Total .. | 225,705 | 232,330 | 10,565 | 221,765 | 2,455 |
| Coimbatore, South. | Special protection .. | 45,500 | 47,261 | 1,923 | 45,338 | 2,278 |
| | General do. .. | 175,600 | 181,104 | 1,653 | 179,451 | .. |
| | Total .. | 221,100 | 228,365 | 3,576 | 224,789 | 2,278 |
| | Total, Special, Western Circle. | 724,046 | 721,630 | 77,057 | 644,573 | 27,398 |
| | Total, General, Western Circle. | 1,564,945 | 1,599,019 | 258,774 | 1,340,245 | 1,605 |
| | Grand total, S. C. .. | 2,288,991 | 2,320,649 | 3,35,831 | 1,984,818 | 29,003 |
| | Total, Presidency, Special. | 3,717,551 | 4,328,346 | 736,168 | 3,592,178 | 1,16,693 |
| | General .. | 5,794,573 | 5,968,022 | 449,415 | 5,508,607 | 9,351 |
| | Grand total, Presidency .. | 9,512,124 | 10,286,368 | 1,185,583 | 9,100,785 | 1,26,044 |

LIBRARY OF THE BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY

## Annual Form No. 73.

*Forest Department, Madras Presidency.*

Area closed and open to grazing during 1915-16.

| District. | Area in square miles. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Closed to all animals. | | Closed to both goats and sheep. | | Area closed to goats only. | Open to all animals. | Total forest area as per form No. 65. |
| | Whole year. | Part of year. | Whole year. | Part of year. | | Whole year. | |
| **Northern Circle.** | | | | | | | |
| *Reserved forests.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | | SQ. MLS. |
| Ganjām | 79 | .. | .. | .. | (*b*) 480 | .. | (*c*) 559 |
| Vizagapatam | 15 | .. | 2 | .. | 295 | .. | 312 |
| Gōdāvari, Upper | .. | .. | .. | .. | 429 | .. | 429 |
| Do. Lower | 56 | .. | 224 | .. | 124 | .. | 404 |
| Kistna | 65 | 10 | .. | .. | 193 | .. | 268 |
| Kurnool, East | 315 | .. | .. | .. | 685 | .. | 1,000 |
| Do. South | 565 | 1 | .. | .. | 200 | .. | 766 |
| Do. West | 194 | .. | .. | .. | 673 | .. | 867 |
| Total | 1,289 | 11 | 226 | .. | 3,079 | .. | 4,605 |
| *Reserved lands.* | | | | | | | |
| Ganjām | .. | .. | .. | .. | 65 | .. | 65 |
| Vizagapatam | .. | .. | .. | .. | 2 | .. | 2 |
| Gōdāvari, Upper | .. | .. | .. | .. | 352 | .. | 352 |
| Do. Lower | .. | .. | .. | .. | 75 | .. | 75 |
| Kistna | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East | .. | .. | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. | .. | .. |
| Do. West | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | .. | .. | .. | 494 | .. | 494 |
| **Central Circle.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| Bellary | 124 | .. | .. | .. | 411 | 84 | 619 |
| Anantapur | 163 | 1 | .. | .. | 587 | .. | 751 |
| Guntūr | 63 | .. | .. | .. | 634 | 117 | 814 |
| Cuddapah, West | 60 | .. | .. | .. | 666 | .. | 726 |
| Do. East | 163 | .. | .. | .. | 921 | .. | 1,084 |
| Nellore | 212 | .. | .. | .. | 510 | .. | 722 |
| Chingleput | 32 | 11 | .. | .. | 163 | 2 | 208 |
| Chittoor | 111 | 33 | .. | .. | 687 | .. | 831 |
| Total | 928 | 45 | .. | .. | 4,579 | 203 | 5,755 |
| *Reserved lands.* | | | | | | | |
| Bellary | 63 | .. | .. | .. | .. | .. | 63 |
| Anantapur | .. | .. | .. | .. | .. | 1 | 1 |
| Guntūr | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West | 3 | .. | .. | .. | .. | .. | 3 |
| Do. East | .. | .. | .. | .. | .. | .. | .. |
| Nellore | 1 | .. | .. | .. | .. | .. | 1 |
| Chingleput | .. | .. | .. | .. | .. | .. | .. |
| Chittoor | .. | .. | .. | .. | .. | .. | .. |
| Total | 67 | .. | .. | .. | .. | 1 | 68 |
| **Southern Circle.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| North Vellore | 58 | .. | .. | .. | 418 | .. | 476 |
| South do. | 50 | .. | .. | .. | 675 | .. | 725 |
| South Arcot *cum* Tanjore | 53 | .. | .. | .. | 300 | .. | 353 |
| North Salem | 96 | .. | .. | .. | 696 | .. | 792 |
| South do. | 58 | 23 | .. | .. | 500 | .. | 581 |
| Trichinopoly | 34 | .. | .. | .. | 297 | .. | 331 |
| Madura | 93 | .. | .. | .. | 567 | .. | 660 |
| Tinnevelly *cum* Ramnad | 237 | 62 | 2 | 2 | 126 | .. | 429 |
| Total | 679 | 85 | 2 | 2 | 3,579 | .. | 4,347 |
| *Reserved lands.* | | | | | | | |
| North Vellore | 2 | .. | .. | .. | .. | .. | 2 |
| South do. | .. | .. | .. | .. | (*a*) | .. | .. |
| South Arcot *cum* Tanjore | .. | .. | .. | .. | .. | .. | .. |
| North Salem | .. | .. | .. | .. | 39 | .. | 39 |
| South do. | .. | .. | .. | .. | 18 | .. | 18 |
| Trichinopoly | .. | .. | .. | .. | 6 | .. | 6 |
| Madura | .. | .. | .. | .. | (*a*) | .. | .. |
| Tinnevelly *cum* Ramnad | .. | .. | .. | .. | .. | .. | .. |
| Total | 2 | .. | .. | .. | 63 | .. | 65 |

(*a*) Area omitted being less than a square mile.
(*b*) Excludes 183 sq. miles in Parlakimedi Maliahs.
(*c*) Do. do.

## Area closed and open to grazing during 1915–16—*cont.*

| District. | Area in square miles. | | | | | | |
|---|---|---|---|---|---|---|---|
| | Closed to all animals. | | Closed to both goats and sheep. | | Area closed to goats only. | Open to all animal | Total forest area as per form No. 65. |
| | Whole year. | Part of year. | Whole year. | Part of year. | | Whole year. | |
| **WESTERN CIRCLE.** | | | | | | | |
| *Reserved forests.* | | | | | | | |
| | SQ. MLS. | SQ. MLS | SQ. MLS. | | SQ. MLS. | | SQ. MLS. |
| Mangalore, North .. | 11 | .. | .. | .. | 351 | .. | 362 |
| Do. South .. | * | .. | .. | .. | 436 | .. | 436 |
| Malabar, North .. .. | 12 | .. | 251 | .. | .. | .. | 263 |
| Do. South .. .. | 143 | .. | .. | .. | .. | .. | 143 |
| The Nilgiris .. .. | 23 | .. | .. | .. | 452 | .. | 475 |
| Kollegal .. .. .. | 81 | .. | .. | .. | 649 | .. | 730 |
| Coimbatore, North .. | 45 | .. | .. | .. | 871 | .. | 916 |
| Do. Central .. | 120 | 37 | .. | .. | 206 | .. | 363 |
| Do. South .. | 87 | .. | 178 | .. | 189 | .. | 454 |
| Total .. | 522 | 37 | 429 | .. | 3,154 | .. | 4,142 |
| *Reserved lands.* | | | | | | | |
| Malabar, North .. .. | * | .. | .. | .. | .. | .. | * |
| Do. South .. | 20 | .. | .. | .. | .. | .. | 20 |
| The Nilgiris .. .. | 4 | .. | .. | .. | 81 | .. | 85 |
| Kollegal .. .. .. | .. | .. | .. | .. | * | .. | * |
| Coimbatore, North .. | .. | .. | .. | .. | 1 | .. | 1 |
| Do. Central .. | 1 | .. | .. | .. | .. | .. | 1 |
| Do. South .. | .. | .. | .. | .. | * | .. | * |
| Total .. | 25 | .. | .. | .. | 82 | .. | 107 |
| Grand total .. | 547 | 37 | 429 | .. | 3,236 | .. | 4,249 |
| Grand total, Presidency .. | 3,512 | 178 | 657 | 2 | 15,030 | 204 | 19,583 |

* Less than one square mile.

ANNUAL

*Forest Department,*

RETURN of grazing in the

| Districts. | Grazing on payment. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| NORTHERN CIRCLE. | | | | | Rs. | | | | | Rs. |
| Ganjam .. .. | .. | .. | .. | .. | .. | (a) & (t) 8,640 | (a) & (u) 29,926 | (a) S 93 | .. Fodder grass. | (v) 8,860 112 |
| Vizagapatam .. | (b) 280 | (b) 3,504 | (b) S 3,842 | .. | 1,496 | (a) 1,347 | (a) 17,514 | (a) S 798 | .. | 3,864 |
| Godavari, Upper.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | (f) 1,105 | (f) 487 | .. | .. | 1,011 | (g) 4,528 | (g) 4,861 | .. | .. Fodder grass. | 3,479 252 |
| Kistna .. .. | (f) 416 | (f) 4,754 (i) 1,786 | (f) S 1,728 | .. | 4,205 | (a) 5,003 | (a) 20,434 | (a) S 14,280 | .. Fodder grass. Panchayat reserve. | 7,046 373 1,620 |
| Kurnool, East .. | (j) 2,418 (b) 2,654 | (j) 11,113 (b) 29,117 | (j) S 104 (b) S 41,616 | .. .. | 13,583 13,808 | .. (a) 1,889 | .. (a) 8,953 | .. (a) S 31,608 | .. .. | 5,350 |
| Do. South .. | (b) 670 | (b) 5,150 | (b) S 6,850 | .. | 2,479 | (a) 3,096 | (a) 17,010 | (a) S 26,815 | .. | 6,864 |
| Do. West .. | (j 51 (b) 4,280 | (j) 3,704 (b) 13,406 | (j) S 96 (b) S 14,109 | (j) 11 .. | 3,814 7,265 | (a) 3,273 | (a) 31,522 | (a) S 52,303 | Fodder grass. 36 cart-loads. | 12,054 |
| Total .. | 11,874 | 73,021 | S 68,345 | 11 | 47,661 | 27,776 | 130,220 | S 125,897 | .. | 49,874 |
| *Unreserved lands.* | | | | | | | | | | |
| Godavari, Upper.. | (c) 206 | (c) 4,973 | .. | .. | 1,657 | .. | .. | .. | .. | .. |
| Do. Lower.. | (f) 207 | (f) 40 | .. | .. | 170 | (g) 6,697 | (g) 8,173 | (a) S 820 | .. Fodder grass. | 5,469 1,861 |
| Kistna .. .. | .. | .. | .. | .. | .. | (a) 802 | (a) 133 | (a) S 50 | .. Fodder grass. | 330 89 |
| Total .. | 413 | 5,013 | .. | .. | 1,827 | 7,499 | 8,306 | S 870 | .. | 7,749 |
| Grand total .. | 12,287 | 78,034 | 68,345 | 11 | 49,488 | 35,275 | 138,526 | S 126,767 | .. | 57,623 |
| CENTRAL CIRCLE. | | | | | | | | | | |
| Bellary .. .. | .. | .. | G 6,719 | .. | 3,359 | 13,503 | 58,191 | S 143,940 | .. | 29,469 |
| | .. | .. | .. | .. | .. | Fodder, grass, etc. | | | .. | 2,294 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 6,250 |
| Anantapur .. | .. | .. | .. | .. | .. | 4,097 | 68,248 | S 163,265 | .. | 30,434 |
| | .. | .. | .. | .. | .. | (p) 115 | 3,982 | S 8,533 | | |
| | .. | .. | .. | .. | .. | Fodder grass. | | | .. | 1,352 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 776 |
| Guntur .. .. | (k) 4,264 | 57,213 | G 21,133 | .. | 85,518 | .. | .. | .. | .. | .. |
| | .. | .. | S 68,388 | | | Fodder grass. | | | .. | 4,716 |
| | (l) 4,594 | 13,613 | S 69,221 | .. | 14,353 | .. | .. | .. | .. | .. |
| Cuddapah, West. | .. | .. | .. | .. | .. | 1,474 | 39,639 | S 92,653 | .. | 16,671 |
| | .. | .. | .. | .. | .. | Penning fees, etc. | | | .. | 46 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 1,026 |
| Do. East.. | (m) .. | 707 | S 940 | .. | 441 | 3,987 | 41,498 | S 76,586 | .. | 16,456 |
| | .. | .. | .. | .. | .. | Penning fees. | | | .. | 61 |
| Nellore .. .. | (n) .. | 9,762 | S 17,425 | .. | 4,619 | 2,077 | .. | .. | .. | 779 |
| | .. | .. | .. | .. | .. | Kancha rent. | | | .. | 69,404 |
| | .. | .. | G 505 | .. | 126 | 2,130 | 28,527 | S 39,100 | .. | 9,813 |
| Chingleput .. | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 349 |
| | .. | .. | .. | .. | .. | Kancha rent. | | | .. | 207 |
| | .. | .. | .. | .. | .. | Penning fees. | | | .. | 2 |
| Chittoor .. | (o) 20 | 640 | S 969 | .. | 437 | 2,434 | 81,449 | S 62,152 | .. | 22,011 |
| | .. | .. | .. | .. | .. | Penning fees. | | | .. | 2 |
| | .. | .. | .. | .. | .. | Panchayat fees. | | | .. | 813 |
| Total .. | 8,878 | 81,935 | G 28,357 S 156,943 | .. | 1,08,853 | 29,817 | 321,534 | S 586,229 | .. | 2,12,931 |

G = Goats. S = Sheep.

(a) The full rates are 6 annas per buffalo, 3 annas per cow or bullock and 1 anna 6 pies per sheep.
(c) Enhanced rates in Godavari Upper are 8 annas per buffalo and 5 annas per cow or bullock.
(e) Privileged rates are 4 annas per buffalo, 2 annas per cow or bull and 1 anna per sheep.
(g) The full rates are 8 annas per buffalo and 4 annas per cow or bull.
(i) At Re. 1 per plough bull.
(t) Excludes 377 buffaloes belonging to Parlakimedi Maliahs.
(u) Do. 1826 cows do.
(v) Do. Rs. 484 fees received in Parlakimedi Maliahs.

FORM No. 74.

*Madras Presidency.*

State forests during 1915–16.

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | Grand total of value at full rates. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates. | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. Actual. | Fees received. Value at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Total value of fees at full rates. | |
| (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 341 | 1,270 | S 54 | .. | 371 | 371 | 9,343 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,360 |
| (*d*) 5,145 | (*d*) 27,516 | (*d*) S 9,698 | .. | 2,666 | 7,998 | .. | .. | .. | .. | .. | 4,556 | 49,772 | S 388 | .. | 11,077 | 11,077 | 19,075 |
| (*e*) 1,356 (*h*) 504 | (*e*) 11,810 (*h*) 15,625 | .. | .. | 2,824 | 7,791 | .. | .. | .. | .. | .. | 752 | 7,114 | .. | .. | 2,154 | 2,154 | 14,687 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 13,244 |
| .. | .. | .. | .. | .. | .. | 157 | 235 | G 762 S 1,140 | .. | 281 | .. | .. | .. | .. | .. | .. | 33,022 |
| .. | .. | .. | .. | .. | .. | 2 | 26 | S 66 | .. | 12 | .. | .. | .. | .. | .. | .. | 9,355 |
| .. | .. | .. | .. | .. | .. | .. | 1,491 | S 3,303 | .. | 589 | .. | .. | .. | .. | .. | .. | 23,722 |
| 7,005 | 54,951 | S 9,698 | .. | 5,490 | 15,789 | 159 | 1,752 | G 762 S 4,509 | .. | 882 | 5,649 | 58,156 | S 442 | .. | 13,602 | 13,602 | 1,27,808 |
| (*e*) 5,808 | (*e*) 38,143 | (*e*) S 770 | .. | 6,268 | 9,402 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11,059 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,500 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 419 |
| 5,808 | 38,143 | S 770 | .. | 6,268 | 9,402 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18,978 |
| 12,813 | 93,094 | S 10,468 | .. | 11,758 | 25,191 | 159 | 1,752 | G 762 S 4,509 | .. | 882 | 5,649 | 58,156 | S 442 | .. | 13,602 | 13,602 | 1,46,786 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 41,372 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 82,562 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1,04,587 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*q*) .. | 159 | S. 200 | .. | 24 | 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17,791 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*r*) .. | 151 | .. | .. | 35 | 80 | .. | 738 | .. | .. | 138 | .. | .. | .. | .. | .. | .. | 17,176 |
| (*s*) .. | 277 | .. | .. | | | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 74,802 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | .. | 15 | 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10,512 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 23,263 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | 587 | S 200 | .. | 59 | 128 | .. | 738 | .. | .. | 138 | .. | 81 | .. | .. | 15 | 15 | 3,22,065 |

(*b*) Enhanced rates are 8 annas per buffalo, 4 annas per cow or bull and 2 annas per sheep.
(*d*) Privileged rates in Bhadrachalam taluk are 2 annas per buffalo, 1 anna per cow or bullock and 6 pies per sheep.
(*f*) The enhanced rates are 12 annas per buffalo, 6 annas per cow or bullock and 3 annas per sheep.
(*h*) Privileged rates are 1 anna per buffalo and 1 anna per bullock or cow.
(*j*) Rate for penta cattle, Re. 1 per cow or buffalo or other animal and annas 8 per sheep.

(1) The enhanced or special rates are—
Goats—Bellary, As 8; Chingleput, As. 4
Guntur .. (*k*) Rs. 1-8 per buffalo, As. 12 per cow, As. 8 per goat and As. 6 per sheep.
(*l*) As. 8 per buffalo, As. 4 per cow, and As. 2 per sheep.
Cuddapah, East .. (*m*) As. 6 per cow and As. 3 per sheep.
Nellore .. (*n*) As. 4 per cow and As. 2 per sheep.
Chittoor .. (*o*) As. 12 per buffalo, As. 6 per cow and As. 3 per sheep.

(2) The full rates are As. 6 per buffalo, As. 3 per cow and As. 1-6 per sheep.
(*p*) Half the full rates for half-year in Anantapur.

(3) The privileged rates are—
Cuddapah, West .. (*q*) As. 1-6 per cow and 9 pies per sheep.
Do. East .. (*r*) Anna 1 per cow.
(*s*) As. 1-6 per cow

*Forest Department,*

Return of grazing in the

| District. | Grazing on payment. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| SOUTHERN CIRCLE. | | | | | RS. | | | | | RS. |
| Nellore, North .. .. | .. | .. | .. | .. | .. | 1,483 | 58,608 | 69,679 | .. | 18,077<br>(*a*) 1,641 |
| Do. South .. .. | .. | 20,243 | .. | .. | 5,061 | 1,774 | 77,914 | 35,702 | .. | 18,621<br>(*c*) 68<br>(*j*) 10 |
| South Arcot *cum* Tanjore. | .. | 112 | (*i*) 868 | .. | 140 | 3,824 | 58,853 | 86,548 | .. | 20,588<br>(*a*) 110<br>(*k*) 393 |
| Salem, North .. .. | 1,717 | 86,182 | 32,158 | .. | 26,424 | 180 | 23,367 | 12,990 | .. | 5,667<br>(*b*) 3<br>(*c*) 420 |
| Do. South .. .. | .. | .. | .. | .. | .. | 822 | 86,083 | 32,449 | .. | 19,491<br>(*c*) 1<br>(*d*) 532 |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | 1,546 | 43,171 | 164,273 | .. | 24,075<br>(*e*) 1 |
| Madura .. .. | 466 | 59,256 | 44,131 | 347 | 20,650 | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | . | (*f*) 467 | .. | .. | 167 | 808 | 16,510 | 18,175 | .. | 5,103<br>(*g*) 237 |
| Total .. | 2,183 | 166,260 | 77,157 | 347 | 52,442 | 10,437 | 364,506 | 419,816 | .. | 1,15,028 |
| WESTERN CIRCLE. | | | | | | | | | | |
| *Reserved Forests.* | | | | | | | | | | |
| Mangalore, North .. | .. | .. | .. | .. | .. | 2,077 | 17,921 | .. | .. | 4,139 |
| Do. South .. | .. | .. | .. | .. | . | 3,391 | 20,118 | .. | .. | 5,044 |
| Malabar, North .. .. | .. | .. | .. | .. | .. | 3,517 | 7,368 | .. | .. | 2,700 |
| Do. South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*t*) .. |
| The Nilgiris .. .. | .. | (*l*) 1,085 | .. | .. | 543 | 11,680 | 21,988<br>(*n*) 70 | S 2,024 | . | 8,699<br>(*m*) 179 |
| Kollegal * .. .. | 3,044 | 67,842 | S 5,749 | .. | 19,201 | .. | .. | .. | .. | .. |
| Coimbatore, North * .. | 6,281 | 75,216 | S 28,685 | .. | 25,530<br>(*m*) 412 | .. | .. | .. | .. | .. |
| Do. Central .. | .. | .. | .. | .. | .. | 239 | 22,378 | S 13,532 | .. | 5,554<br>(*m*) 1,008<br>(*e*) 1,074 |
| Do. South .. | .. | .. | .. | .. | .. | 300 | 9,671 | S 161 | (*p*) 2 | 1,961<br>(*m*) 86<br>(*o*) 166 |
| Total .. | 9,325 | 144,143 | S 34,434 | .. | 45,686 | 21,204 | 99,514 | S 15,717 | 2 | 30,610 |
| *Reserved Lands.* | | | | | | | | | | |
| The Nilgiris .. .. | .. | (*l*) 232 | .. | | 116 | 907 | 1,098 | .. | .. | 546 |
| otal, Western Circle .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Presidency.. | 32,673 | 470,604 | S 336,879<br>G 28,357 | 358 | 2,56,585 | 97,640 | 925,178 | S 1,148,529 | 2 | 4,16,738 |

*Note for S.C.*—The enhanced or special rates are : buffaloes 8 annas, cows, bullock or other animals 4 annas and sheep 2 annas.
The full rates are 6 annas per buffalo, 3 annas per cow, bullock or other animal and 1½ annas per sheep.
The privileged rates are half the full rates.

(*a*) Collection from panchayatdars.
(*b*) Sale-proceeds of fodder grass.
(*c*) Penning license fee.
(*d*) Grazing assessment for the Malayali cattle on the Chitteries as per B.P. Forest No. 142, dated 6th October 1915.
(*e*) Renewal fees.
(*f*) 406 cows at 6 annas each and 61 cows at 4 annas each.
(*g*) Lease amount for grazing in Kavalkuttiparambu reserved forest.
(*h*) Free removal of grass.
(*i*) 105 sheep at 2½ annas each and 763 sheep at 2 annas each.
(*j*) Added to tally with Accountant-General's audited figure.
(*k*) Lease amount of grazing in certain reserves.

S = Sheep. G = Goats.

*Note for W.C.*—The full rates are As. 6 per buffalo, As. 3 per cow, bullock or other animals and As. 1–6 per sheep.
* Annas 8 per buffalo, As. 4 per cow, bullock or other animals and As. 2 per sheep.
(*l*) Annas 8 per cow or bullock.
(*m*) Sale-proceeds of fodder grass.
(*n*) Calves, half rate.
(*o*) Revenue from reserves handed over to Panchayat.
(*p*) Elephants at Rs. 10 each.
(*q*) Annas 3 per 100 per diem.
(*r*) Buffaloes, cows, etc., brought for a cattle fair charged without distinction at a uniform rate of As. 2 per head.
(*s*) Elephant.
(*t*) Excludes Rs. 2 wrongly debited to II (*d*) instead of II (*e*).

*Madras Presidency.*

State forests during 1915-16—*cont.*

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates. | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. (12) | Cows and bullocks. (13) | Sheep. (14) | Other animals. (15) | Fees received. Actual. (16) | Fees received. Value at full rates. (17) | Buffaloes. (18) | Cows and bullocks. (19) | Sheep. (20) | Other animals. (21) | Value of fees at full rates. (22) | Buffaloes. (23) | Cows and bullocks. (24) | Sheep. (25) | Other animals. (26) | Value of fees at full rates. (27) | Total value of fees at full rates. (28) | Grand total of value at full rates. (29) |
| | | | | Rs. | Rs. | | | | | | | | | | Rs. | Rs. | Rs. |
| 47 | 726 | .. | .. | 77 | 154 | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*h*) 5,028 | 5,028 | 24,900 |
| 2,626 | 14,978 | 506 | .. | 1,920 | 3,840 | .. | .. | .. | .. | .. | 30 | 3,268 | 333 | .. | 655 | 655 | 28,250 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*h*) 11 | 11 | 21,237 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 150 | .. | .. | 28 | 28 | 32,542 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,024 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24,076 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,650 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,507 |
| 2,673 | 15,704 | 506 | .. | 1,997 | 3,994 | .. | .. | .. | .. | .. | 30 | 3,418 | 333 | .. | 5,722 | 5,722 | 1,77,186 |
| .. | .. | .. | 18,353 | 2,294 | (*r*) 2,294 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,139 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,338 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*s*) 1 | 91 | 91 | 2,791 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*t*) .. |
| .. | .. | S 17,988(*q*) | .. | 68 | 1,686 | .. | .. | .. | .. | .. | 2,069 | 18 | .. | .. | 779 | 779 | 11,886 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19,201 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 25,942 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,636 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2,213 |
| .. | .. | S 17,988 | 18,353 | 2,362 | 3,980 | .. | .. | .. | .. | .. | 2,069 | 18 | .. | 1 | 870 | 870 | 81,146 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 662 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15,486 | 1,09,385 | 29,162 | 18,353 | 16,176 | 33,293 | 159 | 2,490 | S 4 569 G 762 | .. | 1,020 | 7,748 | 61,673 | 775 | 1 | 20,209 | 20,209 | 7,27,845 |

ABSTRACT of animals licensed to graze on payment.

| Circle. | Buffaloes. | Bullocks and cows. | Sheep. | Goats. | Other animals. | Total. |
|---|---|---|---|---|---|---|
| Northern Circle .. .. .. | 60,375 | 309,654 | 205,580 | .. | 11 | 575,620 |
| Central Circle .. .. .. | 38,695 | 404,056 | 743,372 | 28,357 | .. | 1,214,480 |
| Southern Circle .. .. .. | 15,293 | 546,170 | 497,479 | .. | 347 | 1,059,589 |
| Western Circle .. .. .. | 31,436 | 244,987 | 68,139 | .. | 18,355 | 362,917 |
| Grand Total, Presidency .. | 145,799 | 1,505,167 | 1,514,570 | 28,357 | 18,713 | 3,212,606 |

## Annual Form No. 75.

*Forest Department, Madras Presidency.*

## Area under artificial reproduction, 1915-16.

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1915. | Added during the year. | Excluded during the year. | Area on 30th June 1916. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **Northern Circle.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| | Acs. | Acs. | Acs. | Acs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| * Ganjām .. | (a) 412 | .. | † 412 | (a) .. | .. | (b) .. | (c) 28,199 | (d) 12,918 | .. | 23,216 |
| Vizagapatam .. | 51 | .. | .. | 51 | .. | .. | .. | 5 | 200 | 3,085 |
| Gōdāvari, Lower .. | 418 | .. | † 76 | 342 | .. | 247 | ‡ 31,150 | ‡15,300 | 5,654 | ‡ 52,759 |
| Kistna .. .. | 313 | .. | † 225 | 88 | .. | 100 | ‡ 5,983 | ‡21,160 | .. | ‡ 24,321 |
| Kurnool, East .. | 130 | .. | .. | 130 | .. | 415 | 38,471 | 26,953 | .. | .. |
| Do. West .. | 1,378 | 102 | .. | 1,480 | 15,540 | 4,704 | 2,88,366 | 54,750 | 3,294 | 15,951 |
| Total .. | 2,702 | 102 | † 718 | 2,091 | 15,540 | 5,466 | 3,92,169 | 1,30,086 | 9,148 | 1,19,332 |
| *B.—Cultural Operations.* | | | | | | | | | | |
| * Ganjām .. | 419 | .. | † 419 | .. | .. | .. | 2,268 | 633 | .. | .. |
| Vizagapatam .. | 44 | .. | † 5 | 39 | .. | .. | ‡ 233 | ‡ 3 | .. | .. |
| Gōdāvari, Upper .. | 829 | .. | .. | 829 | .. | .. | 2,225 | 830 | .. | 145 |
| Do. Lower .. | 2,402 | .. | .. | 2,402 | .. | .. | 2,359 | 1,032 | .. | .. |
| Kistna .. .. | 3,603 | 24 | † 2,424 | 1,203 | .. | .. | ‡ 7,624 | ‡ 3,208 | 9,002 | ‡ 50,826 |
| Kurnool, East .. | 33 | .. | .. | 33 | 548 | .. | ‡ 10,333 | 3,561 | .. | .. |
| Do. South .. | 319 | .. | † 182 | 187 | .. | 619 | ‡ 4,069 | 1,536 | .. | .. |
| Do. West .. | 2,438 | 1,020 | .. | 3,458 | 477 | 885 | 21,751 | 1,003 | .. | .. |
| Total .. | 10,087 | 1,044 | † 2,980 | 8,151 | 1,025 | 1,504 | 50,862 | 11,806 | 9,002 | 50,971 |
| **Central Circle.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| *Central Circle.* | | | | | | | | | | |
| Bellary .. .. | 579 | .. | .. | 579 | .. | 40 | 9,423 | 62,495 | 96 | 110 |
| Anantapur .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | 2,822 | .. | 181 | 2,641 | .. | 298 | 48,286 | 32,344 | 9,861 | 37,847 |
| Cuddapah, West .. | 10 | .. | .. | 10 | .. | .. | 560 | .. | .. | .. |
| Do. East .. | 146 | .. | .. | 146 | 23 | 168 | 23 | 351 | 631 | 2,726 |
| Nellore .. .. | 3,960 | .. | .. | 3,960 | .. | 1,107 | 1,56,705 | 16,515 | 68,918 | 6,35,692 |
| Chingleput .. .. | 334 | .. | 334 | .. | .. | 8 | 6,881 | 5,220 | .. | 11,207 |
| Chittoor .. .. | 60 | .. | .. | 60 | .. | 626 | .. | .. | 19 | .. |
| Total .. | 7,911 | .. | 515 | 7,396 | 23 | 2,247 | 2,21,878 | 1,16,925 | 79,025 | 6,87,582 |
| *B.—Taungya Plantations*—Nil. | | | | | | | | | | |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Bellary .. .. | 20,690 | .. | 13,900 | 6,790 | .. | .. | 27,981 | 3,006 | .. | .. |
| Anantapur .. .. | 196 | 164 | .. | 360 | 128 | 19 | 399 | 19 | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West .. | 1,713 | .. | 1,713 | .. | .. | .. | .. | .. | .. | .. |
| Do. East .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | 116 | .. | .. | 116 | .. | 129 | .. | .. | .. | .. |
| Chingleput .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | 267 | 59 | 18 | 308 | 97 | 74 | .. | .. | .. | .. |
| Total .. | 22,982 | 223 | 15,631 | 7,574 | 225 | 222 | 28,380 | 3,025 | .. | .. |
| Grand Total .. | 30,893 | 223 | 16,146 | 14,970 | 248 | 2,469 | 2,50,258 | 1,19,950 | 79,025 | 6,87,582 |

* These will be omitted from future statements.
† Due to revision made with reference to B.P. Forest No. 49, dated 1st April 1916.
‡ Revised figures furnished by District Forest officers.

(a) Excludes 6½ acres of Regular plantation belonging to Parlakimedi Maliahs.
(b) Excludes Rs. 110 spent in Parlakimedi Maliahs.
(c) Do. Rs. 17 do.
(d) Do. Rs. 327 do.

## Area under artificial reproduction, 1915–16—*cont.*

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1915 | Added during the year. | Excluded during the year. | Area on 30th June 1916. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **SOUTHERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| North Vellore .. | 1,831·48 | .. | .. | 1,831·48 | 284 | 698 | 19,881 | 1,33,541 | 2,164 | 82,949 |
| Trichinopoly .. | 146 | .. | (*a*) 146 | .. | .. | .. | .. | .. | .. | .. |
| Madura .. .. | 1 281·60 | 50 | 3 | 1,328·60 | 592 | 34 | 60,763 | 6,977 | 156 | 4,620 |
| Tinnevelly .. | 5,322 | .. | .. | 5,322 | .. | 10 | 6,368 | 1,756 | .. | .. |
| Total .. | 8,581·08 | 50 | 149 | 8,482·08 | 876 | 742 | 87,012 | 1,42,274 | 2,320 | 87,569 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| Tinnevelly .. | 23 | .. | .. | 23 | 6 | .. | 11 | 13 | .. | .. |
| Total .. | 23 | .. | .. | 23 | 6 | .. | 11 | 13 | .. | .. |
| *C.—Cultural Operations.* | | | | | | | | | | |
| North Vellore .. | 840 | .. | .. | 840 | 3 | .. | 66 | 98 | 1 | 579 |
| South do .. | 821·22 | 10 | .. | 831·22 | 43 | .. | 309 | .. | .. | .. |
| South Arcot .. | 6,293 | 529 | .. | 6,822 | .. | .. | 496 | 2,779 | .. | .. |
| North Salem .. | 143 | .. | .. | 143 | | .. | 8,928 | .. | .. | .. |
| South do. .. | 1,013 | .. | .. | 1,013 | .. | .. | 1,245 | 100 | .. | .. |
| Tinnevelly .. | 3,904 | 95 | .. | 3,999 | 116 | 434 | 5,466 | 6,202 | .. | .. |
| Total .. | 13,014·22 | 634 | .. | 13,648·22 | 162 | 434 | 16,510 | 9,179 | 1 | 579 |
| **WESTERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| Mangalore, South .. | 52 | .. | .. | 52 | .. | .. | 32 | 1,367 | .. | 516 |
| Malabar, North .. | 873 | .. | .. | 873 | .. | 463 | 15,272 | 19,195 | .. | 1,939 |
| Do. South .. | 6,474 | .. | .. | 6,474 | 178 | 5,804 | 5,38,120 | 5,39,983 | 1,32,253 | 20,11,084 |
| The Nilgiris .. | 1,743 | .. | .. | 1,743 | .. | 1,227 | 6,462 | 3,11,229 | 38,410 | 6,12,733 |
| Total .. | 9,142 | .. | .. | 9,142 | 178 | 6,994 | 5,59,886 | 8,71,774 | 1,70,663 | 26,26,272 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| Malabar, North .. | 762 | 20 | .. | 782 | .. | 100 | .. | 10,828 | 555 | 5,533 |
| The Nilgiris .. | 19 | .. | .. | 19 | .. | 135 | 367 | 3,364 | .. | .. |
| Total .. | 781 | 20 | .. | 801 | .. | 235 | 367 | 14,192 | 555 | 5,533 |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Malabar, North .. | 4,342 | 277 | .. | 4,619 | 455 | 40 | 2,491 | 7,438 | .. | .. |
| Kollegal .. .. | 6,980 | 70 | .. | 7,050 | 9 | .. | 455 | 149 | .. | .. |
| Coimbatore, North .. | 59 | 115 | 32 | 142 | 65 | .. | 191 | .. | .. | .. |
| Do. Central.. | 1,590 | .. | .. | 1,590 | .. | .. | 1,882 | 143 | .. | .. |
| Do. South .. | 1,187 | 13 | .. | 1,200 | 409 | 56 | 2,770 | 1,379 | .. | .. |
| Total .. | 14,158 | 475 | 32 | 14,601 | 938 | 96 | 7,789 | 9,109 | .. | .. |
| Grand total .. | 24,081 | 495 | 32 | 24,544 | 1,116 | 7,325 | 5,68,042 | 8,95,075 | 1,71,218 | 26,31,805 |
| Total A Regular Plantations. | 28,336 | 152 | 1,377 | 27,111 | 16,617 | 15,449 | 12,60,945 | 12,61,059 | 2,61,156 | 35,20,755 |
| B. Taungya .. | 804 | 20 | .. | 824 | 6 | 235 | 378 | 14,205 | 555 | 5,533 |
| C. Cultural operations | 60,241 | 2,376 | 18,643 | 43,974 | 2,350 | 2,256 | 1,03,541 | 33,119 | 9,003 | 51,550 |
| Grand Total Presidency. | 89,381 | 2,548 | 20,020 | 71,909 | 18,973 | 17,940 | 13,64,864 | 13,08,383 | 2,70,714 | 35,77,838 |

(*a*) One hundred and forty-five acres transferred to the Public Works Department and 1 acre to South Arcot.

*Note.*—The areas have been re-classified as per instructions in B.P. Forest No. 49, dated 1st April 1916, in all divisions except North Malabar for which division the last year's figures have been adopted as the District Forest Officer has not yet classified the areas.

ANNUAL

*Forest Department,*

OUTTURN (in cubic feet solid) of Timber and Fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| NORTHERN | | | | | | | | | | | | | | | |
| *I Reserved* | | | | | | | | | | | | | | | |
| | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. |
| | (*j*) | (*k*) | | | (*l*) | (*m*) | (*n*) | | | (*o*) | | | | | |
| Ganjam .. .. | 685 | 53,347 | .. | .. | 54,032 | 3,732 | 130 | 8,580 | .. | 12,492 | 2,372 | 1,828 | .. | .. | 4,200 |
| Vizagapatam .. .. | 1,622 | .. | .. | .. | 1,622 | .. | 1,483 | .. | .. | 1,483 | .. | .. | .. | .. | .. |
| Godavari, Upper .. | 1,637 | .. | .. | .. | 1,637 | 54 | .. | .. | .. | 54 | .. | .. | .. | .. | .. |
| Do. Lower .. | 1,350 | 24,725 | .. | .. | 26,075 | 351 | 200 | .. | .. | 551 | .. | .. | .. | .. | .. |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | 13,622 | .. | .. | 13,622 | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | 3,744 | 10,457 | .. | .. | 14,168 | 3,069 | 197 | .. | .. | 3,266 | 429 | 754 | .. | .. | 1,183 |
| Do. South .. .. | 1,944 | 19,640 | .. | .. | 21,584 | 1,177 | 40,378 | .. | .. | 41,555 | .. | 382 | .. | .. | 382 |
| Do. West .. .. | 32,29 | 451 | .. | .. | 32,74 | 1,604 | 453 | 3,728 | 787 | 56,572 | 729 | 628 | .. | .. | 1,357 |
| Total, Reserved forests. | 43,240 | 108,620 | .. | .. | 151,860 | 59,987 | 56,513 | 12,308 | 787 | 129,595 | 3,530 | 3,592 | .. | .. | 7,122 |
| *II. Leased* | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| Godavari, Upper .. | 817 | .. | .. | .. | 812 | 845 | .. | .. | .. | 845 | .. | .. | .. | .. | .. |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Ganjam .. .. | 83 | 9,584 | .. | .. | 9,667 | 7,525 | 43,727 | 5,750 | 163,080 | 220,092 | 22,019 | 16,861 | .. | 3,295 | 42,175 |
| Vizagapatam .. .. | .. | .. | .. | .. | .. | 623 | 40,757 | .. | .. | 41,380 | .. | 197 | .. | .. | 197 |
| Godavari, Upper .. | 16,175 | 1,220 | 191 | .. | 17,586 | 12,456 | 3,896 | 471 | .. | 16,803 | .. | .. | .. | .. | .. |
| | (*a*) | (*b*) | (*g*) | | | | (*c*) | | | | | | | | |
| Do. Lower .. | 33,123 | 159,466 | 20,661 | .. | 213,250 | 175 | 58 | .. | .. | 233 | .. | 13,872 | .. | .. | 13,872 |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | .. | 20,632 | .. | .. | 20,632 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | . | 680 | .. | .. | 680 | .. | 7 | .. | .. | 7 | .. | .. | .. | .. | .. |
| Do. West .. | .. | 2,090 | .. | .. | 2,090 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | 49,381 | 193,672 | 20,852 | .. | 263,905 | 20,759 | 88,445 | 6,231 | 163,080 | 278,515 | 22,019 | 30,930 | .. | 3,295 | 56,244 |
| Grand total .. | 93,433 | (*i*)302,292 | 20,852 | .. | (*i*) 416,577 | 81,591 | (*i*) 144,958 | 18,539 | 163,867 | (*i*) 408,95 | 25,549 | 34,522 | .. | 3,295 | 63,366 |

REMARKS.

*Vizagapatam.*

(1) Includes 134 and 816 cubic feet. Sold of this 1,676·11 cubic feet actuals.

432,206 cubic feet estimates.

44,882·11 One cart-load being equivalent to 20 head-loads or 20 cubic feet.

*Godavari, Lower.*

(*a*) Includes 32,771 cubic feet on account of drift wood.

(*l*) Includes 3,745 cubic feet on account of confiscated timber.

(*c*) Represents confiscated produce.

(*d*) Includes 231 cubic feet of fuel confiscated.

| | C. FT. |
|---|---|
| (*e*) Actuals .. .. .. | 4,625,731 |
| Figures obtained by calculating averages .. .. | 163,251 |
| Total .. | 1,788,982 |

(*g*) Figures obtained by conversion at 1 anna per cubic foot out of 206,661 cubic feet. Eight hundred cubic feet relate to the free grant made during 1914-15 which was not included in the accounts for that year.

(*h*) Figures obtained by conversion at 3 pies per cubic foot.

*Kistna.*

Figures under unreserved lands are of approximate estimate.

*Kurnool, East.*

All the items of produce removed by Government Agency are actuals and those by contractor or purchasers are estimates which are taken from the contractors' statements.

*Kurnool, South.*

The figures shown against purchasers are taken from the contractors' accounts. Except the figures shown against Government all other figures are approximate in conversion into cubic feet.

(*i*) Corrected in the Board's office.

(*j*) Excludes 362 c.ft. of timber belonging to Parlakimedi Maliahs.
(*k*) Do. 860 do. do.
(*l*) Do. 1,222 do. do.
(*m*) Do. 270 do. do.
(*n*) Do. 1,630 do. do.
(*o*) Do. 1,900 do. do.

FORM No. 76.

*Madras Presidency.*

during the year 1915–16, and Agency of Exploitation.

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | Total outturn. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | |
| (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| C. FT. | C. FT. | C. FT. | C.FT. | C. FT. | C. FT. (p) | C. FT. (q) | C. FT. | C. FT. | C. FT. (r) | C. FT. (s) | C. FT. (t) | C. FT. | C. FT. | C. FT. (u) | C. FT. (v) |
| 60,040 | 1,500 | .. | .. | 61,540 | 66,829 | 56,855 | 8,580 | .. | 132,264 | 16,770 | 298,287 | .. | 427,359 | 742,416 | 874,680 |
| | | | | | | | | | | (1) | | | | | |
| .. | .. | .. | .. | .. | 1,622 | 1,483 | .. | .. | 3,105 | 68,960 | 48,211 | .. | .. | 117,171 | 120,276 |
| 639 | .. | .. | .. | 639 | 2,330 | .. | .. | .. | 2,330 | .. | .. | .. | .. | .. | 2,330 |
| | | | | | | | | | | | (e) | | | | |
| .. | .. | .. | .. | .. | 1,701 | 24,925 | .. | .. | 26,626 | 11,585 | 1,788,982 | .. | .. | 1,800,567 | 1,827,193 |
| 34 | 25,232 | .. | .. | 25,266 | 34 | 38,854 | .. | .. | 38,888 | 10,000 | 807,112 | .. | .. | 817,112 | 856,000 |
| 2,042 | 99 | 573 | .. | 2,714 | 9,251 | 11,507 | 573 | .. | 21,331 | 46,450 | 11,540 | .. | .. | 57,990 | 79,321 |
| 175 | 1,605 | 69 | 36 | 1,885 | 3,296 | 62,005 | 69 | 36 | 65,406 | 300 | 211,309 | .. | 330 | 211,939 | 277,345 |
| 1,915 | .. | .. | .. | 1,915 | 86,539 | 1,532 | 3,728 | 787 | 92,586 | 482,374 | 24,045 | .. | 154,506 | 660,925 | 753,511 |
| 64,845 | 28,436 | 642 | 36 | 93,959 | 171,602 | 197,161 | 12,950 | 823 | 382,536 | 636,439 | 3,189,486 | .. | 582,195 | 4,408,120 | 4,790,656 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| 80 | .. | .. | .. | 80 | 1,737 | .. | .. | .. | 1,737 | .. | .. | .. | .. | .. | 1,737 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 181,695 | .. | .. | 181,695 | 29,627 | 251,867 | 5,760 | 166,375 | 453,629 | 7,650 | 205,367 | .. | .. | 213,017 | 666,646 |
| .. | .. | 200 | .. | 200 | 623 | 40,954 | 200 | .. | 41,777 | .. | 50,697 | .. | .. | 50,697 | 92,474 |
| 5,709 | 26,348 | .. | .. | 32,057 | 34,320 | 31,464 | 662 | .. | 66,446 | 2,808 | 75,815 | | .. | 78,623 | 145,069 |
| | | | | | | | | | | | (d) | (a) | | | |
| .. | 90,148 | .. | .. | 90,148 | 33,298 | 263,544 | 20,661 | .. | 317,503 | 1,463 | 191,628 | 3,462 | .. | 196,553 | 514,056 |
| 240 | 50,656 | 7,008 | .. | 57,904 | 240 | 50,656 | 7,008 | .. | 57,904 | 390 | 50,192 | .. | .. | 50,582 | 108,486 |
| .. | 38 | .. | .. | 38 | .. | 20,670 | .. | .. | 20,670 | . | 4,520 | .. | .. | 4,520 | 25,190 |
| .. | 47,276 | 279 | .. | 47,555 | .. | 47,963 | 279 | .. | 48,242 | .. | 98,973 | .. | .. | 98,973 | 147,215 |
| .. | .. | .. | .. | .. | .. | 2,090 | .. | .. | 2,090 | .. | 207,720 | .. | .. | 207,720 | 209,810 |
| 5,949 | 396,161 | 7,487 | .. | 409,597 | 98,108 | 709,208 | 34,570 | 166,375 | 1,008,261 | 12,311 | 884,912 | 3,462 | .. | 900,685 | 1,908,946 |
| 70,874 | 424,597 | 8,129 | 36 | 503,636 | 271,447 | 906,369 | 47,520 | 167,198 | 1,392,534 | 648,750 | 4,074,398 | 3,462 | 582,195 | 5,308,805 | 6,701,339 |

* Corrected in the Board's office.

(p) Excludes 632 cubic feet of timber belonging to Parlākimedi Maliahs.
(q) Do. 2,490 do. do. do. do.
(r) Do. 3,122 do. do. do. do.
(s) Do. 19,720 do. fuel do. do.
(t) Do. 67,488 do. do. do. do.
(u) Do. 87,208 do. do. do. do.
(v) Do. 90,330 do. do do. do.

Outturn (in cubic feet solid) of Timber and Fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| **CENTRAL** | | | | | | | | | | | | | | | |
| *I. Reserved* | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | | | C. FT. |
| Bellary .. .. .. | .. | .. | .. | .. | .. | 22 | 1,320 | .. | .. | 1,342 | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 400 | 392 | .. | 792 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West .. | .. | .. | .. | .. | .. | 256 | 6,486 | .. | .. | 6,742 | .. | .. | .. | .. | .. |
| Do. East .. .. | .. | .. | .. | .. | .. | 16,494 | 76,912 | .. | .. | 93,406 | .. | .. | .. | .. | .. |
| Nellore .. .. .. | 263 | .. | .. | .. | 263 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | 945 | .. | .. | .. | 945 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. .. | 129 | 3,379 | .. | .. | 3,508 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 1,337 | 3,779 | 392 | .. | 5,508 | 16,772 | 84,718 | . | .. | 101,490 | .. | .. | .. | .. | |
| *II. Leased* | | | | | | | | | | | | | | | |
| Bellary .. .. .. | 9 | .. | .. | .. | (a) 9 | .. | .. | 5,100 | .. | 5,100 | .. | .. | .. | .. | .. |
| *III. Reserved* | | | | | | | | | | | | | | | |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | 31,211 | 3,062 | .. | 34,273 | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 126,560 | 2,744 | . | 129,304 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. East .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. .. | 330 | .. | .. | .. | 330 | .. | .. | .. | .. | .. | .. | .. | .. | . | .. |
| Chingleput .. .. | .. | 68,051 | .. | .. | 68,051 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 330 | 194,611 | 2,744 | .. | 197,685 | .. | 31,211 | 3,062 | .. | 34,273 | .. | .. | .. | .. | .. |
| Grand total .. | 1,676 | 198,390 | 3,136 | .. | 203,202 | 16,772 | 115,929 | 8,162 | .. | 140,863 | .. | .. | .. | .. | .. |
| **SOUTHERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 29 | .. | .. | .. | 29 | 4 | 328 | .. | .. | 332 | .. | .. | .. | .. | .. |
| Do. South .. .. | 452 | .. | .. | .. | 452 | 29 | .. | .. | .. | 29 | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2,079 | .. | .. | . | 2,079 |
| Do. South .. .. | 545 | 21 | .. | .. | 566 | 216 | 66 | .. | .. | 282 | 1,047 | 229 | .. | .. | 1,276 |
| Trichinopoly .. .. | 32 | 617 | . | .. | 649 | .. | .. | .. | .. | .. | 126 | 3 | .. | .. | 129 |
| Madura .. .. .. | 2,672 | 151 | 275 | .. | 3,098 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 1,490 | 17,731 | .. | .. | 19,221 | 215 | 16,338 | .. | .. | 16,553 | 1,245 | 15,933 | .. | .. | 17,178 |
| Total of reserved forests. | 5,220 | 18,520 | 275 | .. | 24,015 | 464 | 16,732 | .. | .. | 17,196 | 4,497 | 16,165 | .. | .. | 20,662 |
| *II. Leased* | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1,841 | .. | .. | .. | 1,841 |
| Do. South .. .. | 91 | 371 | .. | .. | 462 | .. | 10,330 | 3,800 | .. | 14,130 | .. | 123 | .. | .. | 123 |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | 1,960 | .. | 1,960 | .. | .. | .. | .. | .. |
| Madura .. .. .. | .. | .. | 160 | .. | 160 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | .. | 1,760 | .. | 1,760 | .. | .. | 645 | .. | 645 | .. | .. | .. | .. | .. |
| Total of unreserved lands. | 91 | 371 | 1,920 | .. | 2,382 | .. | 10,330 | 6,405 | .. | 16,735 | 1,841 | 123 | .. | .. | 1,964 |
| *All* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 29 | .. | .. | .. | 29 | 4 | 328 | .. | .. | 332 | .. | .. | .. | .. | .. |
| Do. South .. .. | 452 | .. | .. | .. | 452 | 29 | .. | .. | .. | 29 | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3,920 | .. | .. | .. | 3,920 |
| Do. South .. .. | 636 | 392 | .. | .. | 1,028 | 216 | 10,396 | 3,800 | .. | 14,412 | 1,047 | 352 | .. | .. | 1,399 |
| Trichinopoly .. .. | 32 | 617 | .. | .. | 649 | .. | .. | 1,960 | .. | 1,960 | 126 | 3 | .. | .. | 129 |
| Madura .. .. .. | 2,672 | 151 | 435 | .. | 3,258 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 1,490 | 17,731 | 1,760 | .. | 20,981 | 215 | 16,338 | 645 | .. | 17,198 | 1,245 | 15,933 | .. | .. | 17,178 |
| Total .. | 5,311 | 18,891 | 2,195 | .. | 26,397 | 464 | 27,062 | 6,405 | .. | 33,931 | 6,338 | 16,288 | .. | .. | 22,626 |

CENTRAL CIRCLE REMARKS.

(*a*) Sandalwood (*Santalum album*).

*Reserved forests, Leased forest and unreserved lands—Timber and fuel—Government agency and Free grantees.*—Actuals.

*Timber and fuel—Purchasers.*—Estimates based on accounts furnished by purchasers in reserved forests and on money value realized in unreserved lands.

during the year 1915-16, and Agency of Exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| **Circle.** | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. |
| .. | .. | .. | .. | .. | 22 | 1,320 | .. | .. | 1,342 | 4,560 | 158,555 | .. | .. | 163,115 | 164,457 |
| .. | .. | .. | .. | .. | .. | 400 | 392 | .. | 792 | .. | 8,910 | .. | .. | 8,910 | 9,702 |
| 574 | 24,016 | .. | .. | 24,590 | 574 | 24,016 | .. | .. | 24,590 | .. | 739,600 | .. | .. | 739,600 | 764,190 |
| .. | 48,640 | 508 | .. | 49,148 | 256 | 55,126 | 508 | .. | 55,890 | 2,400 | 498,520 | .. | .. | 500,920 | 556,810 |
| .. | .. | 770 | .. | 770 | 16,757 | 76,912 | 770 | .. | 94,439 | 9,503 | 2,925,085 | .. | .. | 2,934,588 | 3,029,027 |
| .. | .. | .. | .. | .. | 945 | .. | .. | .. | 945 | 4,587 | 73,618 | .. | .. | 78,205 | 79,150 |
| 300 | .. | | .. | 300 | 429 | 3,379 | .. | .. | 3,808 | 2,011 | 115,128 | .. | .. | 117,139 | 120,947 |
| 427 | 26,020 | 216 | .. | 26,663 | 427 | 26,020 | 216 | .. | 26,663 | 800 | 509,464 | .. | .. | 510,264 | 536,927 |
| 1,301 | 98,676 | 1,494 | .. | 101,471 | 19,416 | 187,173 | 1,886 | .. | 208,469 | 23,861 | 5,028,880 | .. | .. | 5,052,741 | 5,261,210 |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 9 | .. | 5,100 | .. | 5,109 | 200 | 8,620 | .. | .. | 8,820 | 13,929 |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | 31,211 | 3,062 | .. | 34,273 | .. | 131,413 | .. | .. | 131,413 | 165,686 |
| .. | .. | .. | .. | .. | .. | 126,560 | 2,744 | .. | 129,304 | .. | 233,665 | .. | .. | 233,665 | 362,969 |
| .. | 244,704 | 17,929 | .. | 262,633 | .. | 244,704 | 17,929 | .. | 262,633 | .. | 159,456 | .. | .. | 159,456 | 422,089 |
| .. | 81,286 | 612 | .. | 81,898 | .. | 81,286 | 612 | .. | 81,898 | .. | 466,943 | .. | .. | 466,943 | 548,841 |
| .. | 11,059 | .. | .. | 11,059 | .. | 11,059 | .. | | 11,059 | .. | 73,742 | .. | .. | 73,742 | 84,801 |
| .. | 30,028 | 8,670 | .. | 38,698 | 330 | 30,023 | 8,670 | .. | 39,028 | .. | 70,835 | .. | .. | 70,835 | 109,863 |
| .. | .. | 510 | .. | 510 | .. | 68,051 | 510 | .. | 68,561 | .. | 98,720 | .. | .. | 98,720 | 167,281 |
| 67 | 136,327 | 7,215 | .. | 143,609 | 67 | 136,327 | 7,215 | .. | 143,609 | 260 | 102,987 | .. | .. | 103,247 | 246,856 |
| 67 | 503,404 | 34,936 | .. | 538,407 | 397 | 729,226 | 40,742 | .. | 770,365 | 260 | 1,337,761 | .. | .. | 1,338,021 | 2,108,386 |
| 1,368 | 602,080 | 36,430 | .. | 639,878 | 19,813 | 916,399 | 47,728 | .. | 983,943 | 24,321 | 6,375,261 | | .. | 6,399,582 | 7,383,525 |
| **Circle.** | | | | | | | | | | | | | | | |
| *Forests* | | | | | | | | | | | | | | | |
| 32 | .. | .. | .. | 32 | 65 | 328 | .. | .. | 393 | 10,618 | 607,635 | .. | .. | 618,253 | 618,646 |
| 4,445 | 2,623 | .. | .. | 7,068 | 4,926 | 2,623 | .. | .. | 7,549 | 1,547 | 258,676 | .. | .. | 260,223 | 267,772 |
| .. | 3,120 | .. | .. | 3,120 | .. | 3,120 | .. | .. | 3,120 | 2,987 | 329,972 | 200 | .. | 333,159 | 336,279 |
| .. | 494 | 480 | .. | 974 | 2,079 | 494 | 480 | .. | 3,053 | 2,700 | 155,234 | .. | .. | 157,934 | 160,987 |
| .. | 4 | .. | .. | 4 | 1,808 | 320 | .. | .. | 2,128 | .. | 307,118 | .. | .. | 307,118 | 309,246 |
| .. | 137 | .. | .. | 137 | 158 | 757 | .. | .. | 915 | 22,285 | 275,139 | .. | .. | 297,424 | 298,339 |
| .. | .. | .. | .. | .. | 2,672 | 151 | 275 | .. | 3,098 | 4,720 | 647,346 | .. | .. | 652,066 | 655,164 |
| 691 | 23,985 | .. | .. | 24,676 | 3,641 | 73,987 | .. | .. | 77,628 | 25,575 | 960,155 | .. | .. | 985,730 | 1,063,358 |
| 5,168 | 30,363 | 480 | .. | 36,011 | 15,349 | 81,780 | 755 | .. | 97,884 | 70,432 | 3,541,275 | 200 | .. | 3,611,907 | 3,709,791 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36,958 | .. | .. | 36,958 | 36,958 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 68,635 | 2,221 | .. | 70,856 | .. | 68,635 | 2,221 | .. | 70,856 | .. | 62,828 | .. | .. | 62,828 | 133,684 |
| .. | 56,666 | 3,880 | .. | 60,546 | .. | 56,666 | 3,880 | .. | 60,546 | .. | 45,512 | .. | .. | 45,512 | 106,058 |
| .. | 31,181 | 2,578 | .. | 33,759 | .. | 31,181 | 2,578 | .. | 33,759 | .. | 153,072 | 233 | .. | 153,305 | 187,064 |
| .. | 170,905 | .. | .. | 170,905 | 1,841 | 170,905 | .. | .. | 172,746 | .. | 100,335 | .. | .. | 100,335 | 273,081 |
| .. | 145,181 | .. | .. | 145,181 | 91 | 156,005 | 3,800 | .. | 159,896 | .. | 63,672 | .. | .. | 63,672 | 223,568 |
| .. | 141,755 | 335 | .. | 142,090 | .. | 141,755 | 2,295 | .. | 144,050 | .. | 33,055 | .. | .. | 33,055 | 177,105 |
| .. | 89,941 | 730 | .. | 90,671 | .. | 89,941 | 890 | .. | 90,831 | .. | 88,221 | .. | .. | 88,221 | 179,052 |
| .. | 1,470 | .. | .. | 1,470 | .. | 1,470 | 2,405 | .. | 3,875 | .. | 114,185 | 2,446 | .. | 116,631 | 120,506 |
| .. | 705,734 | 9,744 | .. | 715,478 | 1,932 | 716,558 | 18,069 | .. | 736,559 | .. | 660,880 | 2,679 | .. | 663,559 | 1,400,118 |
| *Extract.* | | | | | | | | | | | | | | | |
| 32 | 68,635 | 2,221 | .. | 70,888 | 65 | 68,963 | 2,221 | .. | 71,249 | 10,618 | 670,463 | .. | .. | 681,081 | 752,330 |
| 4,445 | 59,289 | 3,880 | .. | 67,614 | 4,926 | 59,289 | 3,880 | .. | 68,095 | 1,547 | 304,188 | .. | .. | 305,735 | 373,830 |
| .. | 34,301 | 2,578 | .. | 36,879 | .. | 34,301 | 2,578 | .. | 36,879 | 2,987 | 520,002 | 433 | .. | 523,422 | 560,301 |
| .. | 171,399 | 480 | .. | 171,879 | 3,920 | 171,399 | 480 | .. | 175,799 | 2,700 | 255,569 | .. | .. | 258,269 | 434,068 |
| .. | 145,185 | .. | .. | 145,185 | 1,899 | 156,325 | 3,800 | .. | 162,024 | .. | 370,790 | .. | .. | 370,790 | 532,814 |
| .. | 141,892 | 335 | .. | 142,227 | 158 | 142,512 | 2,295 | .. | 144,965 | 22,285 | 308,194 | .. | .. | 330,479 | 475,444 |
| .. | 89,941 | 730 | .. | 90,671 | 2,672 | 90,092 | 1,165 | .. | 93,929 | 4,720 | 735,567 | .. | .. | 740,287 | 834,216 |
| 691 | 25,455 | .. | .. | 26,146 | 3,641 | 75,457 | 2,405 | .. | 81,503 | 25,575 | 1,074,340 | 2,446 | .. | 1,102,361 | 1,183,864 |
| 5,168 | 736,097 | 10,224 | .. | 751,489 | 17,281 | 798,338 | 18,824 | .. | 834,443 | 70,432 | 4,239,113 | 2,879 | .. | 4,312,424 | 5,146,867 |

Southern Circle Remarks.

*Timber and fuel—Government agency and free grantees.*—Actuals.
*Reserved forest—Purchasers—Timber.*—Estimates based on the amounts realized.
*Reserved forests and reserved lands—Purchasers—Fuel.*—Estimates based chiefly on the accounts furnished by coupe contractors.
*Unreserved lands—Timber and fuel—Purchasers.*—Estimates based on the money value realized.

Outturn (in cubic feet solid) of Timber and Fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | | C. FT. |
| **WESTERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| Mangalore, North .. | 2,095 | 176 | .. | .. | 2,271 | .. | .. | .. | .. | .. | 2,472 | .. | .. | .. | 2,472 |
| Do. South .. | 3,909 | 8,612 | .. | .. | 12,521 | | .. | .. | .. | .. | 52 | .. | .. | .. | 52 |
| Malabar, North .. | 3,990 | 531 | .. | .. | 4,521 | 770 | .. | 63 | .. | 833 | 112,005 | 6,182 | .. | .. | 118,187 |
| Do. South .. | 7,437 | 16,275 | .. | .. | 23,712 | 11,861 | .. | .. | .. | 11,861 | .. | .. | .. | .. | .. |
| The Nilgiris .. | 675 | 1,958 | .. | .. | 2,633 | 28 | .. | .. | .. | 28 | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | 6 | .. | .. | .. | 6 | 1,367 | .. | .. | .. | 1,367 |
| Coimbatore, North .. | 1,642 | .. | .. | .. | 1,642 | .. | .. | .. | .. | .. | 3,533 | 5 | .. | .. | 3,538 |
| Do. Central .. | 2,090 | 17,675 | 19 | .. | 19,784 | .. | 4,719 | .. | .. | 4,719 | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | 400 | .. | .. | 400 | 4,886 | 5,534 | .. | .. | 10,420 |
| Total .. | 21,838 | 45,227 | 19 | .. | 67,084 | 12,665 | 5,119 | 63 | .. | 17,847 | 124,315 | 11,721 | .. | .. | 136,036 |
| *II. Leased* | | | | | | | | | | | | | | | |
| Malabar, South .. | 70,509 | 1,289 | .. | .. | 71,798 | 15,885 | .. | .. | .. | 15,885 | .. | .. | .. | .. | .. |
| The Nilgiris .. | 43,514 | .. | .. | .. | 43,514 | 3,225 | .. | .. | .. | 3,225 | .. | .. | .. | .. | .. |
| Coimbatore, South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9,937 | .. | .. | .. | 9,937 |
| Total .. | 114,023 | 1,289 | .. | .. | 115,312 | 19,110 | .. | .. | .. | 19,110 | 9,937 | .. | .. | .. | 9,937 |
| *III. Reserved* | | | | | | | | | | | | | | | |
| The Nilgiris .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Mangalore, North .. | .. | 95,344 | 2,425 | 11,600 | 109,369 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | 95,422 | 69 | 3,850 | 99,341 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Malabar, South .. | 93 | 5,163 | .. | .. | 5,256 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| The Nilgiris .. | 183 | 7,093 | .. | .. | 7,276 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North .. | .. | 26,111 | .. | .. | 26,111 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Central .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 276 | 229,133 | 2,494 | 15,450 | 247,353 | 1 | .. | .. | . | 1 | .. | .. | .. | .. | .. |
| Grand total, W.C. | 136,137 | 275,649 | 2,513 | 15,450 | 429,749 | 31,776 | 5,119 | 63 | . | 36,958 | 134,252 | 11,721 | .. | .. | 145,973 |
| Total, Presidency .. | 236,557 | 795,222 | 28,696 | 15,450 | 1,075,925 | 130,603 | 293,068 | 33,169 | 163,867 | 620,707 | 166,139 | 62,531 | .. | 3,295 | 231,965 |

REMARKS.—The figures are actuals except in the following cases:—

*Mangalore, North and South.*

Outturn under all agencies except "Government."

Factors of conversion.
One tree = 25 cubic feet.

*South Malabar.*

Reserved forests (column 2), 7,063 cubic feet .. ..
Leased forests (column 2), 62,389 do. .. ..
Do. (column 7), 14,327 do. .. ..

One log of above 4 candies = 52 cubic feet.
Do. from 2 to 4 candies = 26 do..
Do. under 2 candies = 20 cubic feet.

Reserved forests (column 7), 11,518 do. .. ..

One short log = 4 cubic feet.
Measurable = 6 cubic feet.
Calculated as per standard measurements for the smaller class of saplings.

Reserved forests (column 28), 112 do. .. ..

One cart-load = 20 cubic feet.
One cocoanut tree = 1 cubic foot.

Do. (column 3), 16,275 do. .. ..
Leased forests (column 17), 108 do. .. ..
Do. (column 28), 2 do. .. ..
Unreserved lands (column 7), 1 cubic foot .. ..

465 logs at 35 cubic feet per log.
One log = 6 cubic feet.
One cubic foot per log.
Half cubic foot for each pole.

*The Nilgiris.*

Reserved forests (column 17), 173 cubic feet .. ..
Unreserved lands (column 17), 100 do. .. ..

545 quarters of sandalwood at half a cubic foot per quarter.

Timber and firewood from unreserved lands are converted on sums realized at Rs. 1-8-0 per cart-load of 20 cubic feet.

*Kollegal.*

Reserved forests (column 17), 3,174 cubic feet .. ..
Do. (column 7), 6 do. .. ..

6,348 quarters of sandalwood at half a cubic foot per quarter.
12 posts at half a cubic foot per post.

*Central Coimbatore.*

Unreserved lands .. .. .. .. .. ..

The sale amount is converted into yield, the factor of conversion being 16 cubic feet per rupee.

during the year 1915-16, and Agency of Exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| **Circle.** | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | C. FT. | | C. FT. | C. FT. |
| .. | .. | .. | .. | .. | 4,567 | 176 | .. | .. | 4,743 | 13,129 | 270,223 | .. | .. | 283,352 | 288,095 |
| .. | .. | .. | .. | .. | 3,961 | 8,612 | .. | .. | 12,573 | 32,616 | 77,097 | .. | .. | 109,713 | 122,286 |
| . | .. | .. | .. | .. | 116,765 | 6,713 | 63 | .. | 123,541 | .. | .. | .. | .. | .. | 123,541 |
| .. | .. | .. | .. | .. | 19,298 | 16,275 | .. | .. | 35,573 | 552 | 112 | .. | .. | 664 | 36,237 |
| 173 | .. | 20 | .. | 193 | 876 | 1,958 | 20 | .. | 2,854 | 445,508 | 28,159 | .. | .. | 473,667 | 476,521 |
| 3,174 | .. | .. | . | 3,174 | 4,547 | .. | .. | .. | 4,547 | 107,500 | .. | .. | .. | 107,500 | 112,047 |
| 2,294 | 1,033 | 880 | .. | 4,207 | 7,469 | 1,038 | 880 | .. | 9,387 | .. | 556,585 | .. | .. | 556,585 | 565,972 |
| .. | 14,303 | .. | .. | 14,303 | 2,090 | 36,697 | 19 | .. | 38,806 | 16,925 | 972,996 | .. | .. | 989,921 | 1,028,727 |
| 142 | 3,828 | 440 | .. | 4,410 | 5,028 | 9,762 | 440 | .. | 15,230 | .. | 405,219 | .. | .. | 405,219 | 420,449 |
| 5,783 | 19,164 | 1,340 | .. | 26,287 | 164,601 | 81,231 | 1,422 | .. | 247,254 | 616,230 | 2,310,391 | .. | .. | 2,926,621 | 3,173,875 |
| *Forests.* | | | | | | | | | | | | | | | |
| 108 | .. | .. | .. | 108 | 86,502 | 1,289 | .. | .. | 87,791 | 5,338 | 2 | .. | .. | 5,340 | 93,131 |
| .. | .. | .. | .. | .. | 46,739 | .. | .. | .. | 46,739 | .. | 100 | .. | .. | 100 | 46,839 |
| 651 | .. | .. | . | 651 | 10,588 | .. | .. | .. | 10,588 | .. | .. | .. | .. | .. | 10,588 |
| 759 | .. | .. | .. | 759 | 143,829 | 1,289 | .. | .. | 145,118 | 5,338 | 102 | .. | .. | 5,440 | 150,558 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | 6 | .. | 6 | .. | .. | 6 | .. | 6 | .. | .. | .. | .. | .. | 6 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | 95,344 | 2,425 | 11,600 | 109,369 | .. | 595,365 | .. | .. | 595,365 | 704,734 |
| .. | .. | .. | .. | .. | .. | 95,422 | 69 | 3,850 | 99,341 | .. | 175,503 | .. | .. | 175,503 | 274,844 |
| .. | .. | .. | .. | .. | 94 | 5,163 | .. | .. | 5,257 | 40 | 161 | .. | .. | 201 | 5,458 |
| 100 | .. | .. | .. | 100 | 283 | 7,093 | .. | .. | 7,376 | .. | 3,340 | .. | .. | 3,340 | 10,716 |
| .. | 6,434 | 63 | .. | 6,497 | .. | 6,434 | 63 | .. | 6,497 | .. | 13,316 | 580 | .. | 13,896 | 20,393 |
| .. | .. | .. | .. | .. | .. | 26,111 | .. | .. | 26,111 | .. | 22,722 | .. | .. | 22,722 | 48,833 |
| .. | 61,056 | 320 | .. | 61,376 | .. | 61,056 | 320 | .. | 61,376 | .. | 97,987 | .. | .. | 97,987 | 159,363 |
| .. | .. | 80 | .. | 80 | .. | .. | 80 | .. | 80 | .. | .. | .. | .. | .. | 80 |
| 100 | 67,490 | 463 | .. | 68,053 | 377 | 296,623 | 2,957 | 15,450 | 315,407 | 40 | 908,894 | 580 | .. | 909,014 | 1,224,421 |
| 6,642 | 86,654 | 1,809 | .. | 95,105 | 308,807 | 379,143 | 4,385 | 15,450 | 707,785 | 621,608 | 3,218,887 | 580 | .. | 3,841,075 | 4,543,860 |
| 84,052 | 1,849,423 | 56,592 | 36 | 1,990,103 | 617,351 | 3,000,249 | 118,457 | 182,648 | 3,918,705 | 1,365,111 | 17,907,659 | 6,921 | 582,195 | 19,861,886 | 23,780,591 |

## ANNUAL FORM No. 77.

*Forest Department, Madras Presidency.*

## OUTTURN of Minor Forest Produce during the year 1916-17.

| Circle. | Description of produce. | Produce removed or utilised | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free-grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | | NO. | RS. | RS. | RS. | RS. | RS. |
| Northern Circle .. | Bamboos .. .. .. .. | 259,837 | 4,533 | 1,41,664 | 278 | 407 | 1,46,882 |
| | | MDS. | | | | | |
| | Grazing and fodder grass .. | .. | .. | 1,19,005 | .. | 798 | 1,19,803 |
| | Grass (tharbi, korai, etc.). .. | 16,099 | 190 | 698 | 30 | .. | 918 |
| | Tamarind, soapnuts, galnuts, nux-vomica, sheakoy, etc. | 7,484 | 4,365 | 32,116 | .. | .. | 36,481 |
| | Horns, honey, wax, resin, gum, skins, etc. | .. | .. | 715 | .. | .. | 715 |
| | Tangedu, etc., barks and fibres. | 106 | 21 | 33,094 | 1 | .. | 33,116 |
| | Stone, gravel, earth, etc. .. | 1,125 | 5 | 4,088 | .. | .. | 4,093 |
| | Leaves for platters .. .. | .. | .. | 679 | .. | .. | 679 |
| | Date and palmyra leaves, stacks, etc. | 100 | 14 | 4 | 31 | .. | 49 |
| | Manure leaves and thorns .. | .. | .. | 843 | .. | .. | 843 |
| | Miscellaneous, including tree-tapping and tree-owners' fees. | 13,285 | 3,719 | 83,577 | 57 | 23,071 | 1,10,424 |
| | Total, minor produce only .. | 38,199 | 8,314 | (a)2,74,819 | 119 | 23,869 | 3,07,121 |
| Central Circle .. | | NO. | | | | | |
| | Bamboos .. .. .. .. | 1,773 | 13 | 17,301 | 167 | .. | 17,481 |
| | Grazing and fodder grass .. | .. | .. | 3,21,843 | .. | 138 | 3,21,981 |
| | | MDS. | | | | | |
| | Grass (thatch) and korai, etc. .. | 3,231 | 143 | 1,348 | 29 | .. | 1,520 |
| | Tamarind, soapnuts and gallnuts. | 4,323 | 7,172 | 51,452 | .. | .. | 58,624 |
| | Horns, honey, wax, gum, etc. | .. | .. | 6,150 | .. | .. | 6,150 |
| | Tangedu, vembadam, etc. .. | 232 | 373 | 2,53,904 | .. | .. | 2,54,277 |
| | Mica, stone, gravel, etc. .. | .. | .. | 36,650 | 22 | .. | 36,672 |
| | Manure leaves, thorns, etc. .. | 60 | 23 | 5,650 | .. | .. | 5,673 |
| | Date, palmyra leaves, etc. .. | .. | .. | 2,945 | 262 | .. | 3,207 |
| | Miscellaneous including tree-tapping and tree-owners' fees. | 304 | 776 | 82,819 | .. | .. | 83,595 |
| | Total .. | 8,150 | 8,487 | 4,40,918 | 313 | .. | 4,49,718 |
| | Grand Total .. | .. | 8,500 | 7,80,062 | 480 | 138 | 7,89,180 |
| Southern Circle .. | | NO. | | | | | |
| | Bamboos .. .. .. .. | 4,848 | 289 | 1,10,692 | 454 | .. | 1,11,435 |
| | | MDS. | | | | | |
| | Grazing and fodder grass .. | .. | .. | 1,69,467 | 5,722 | .. | 1,75,189 |
| | Grass (thatch, korai, etc.) .. | 1,258 | 10 | 7,031 | 5 | 61 | 7,107 |
| | Dammer, cardamoms, etc. .. | 1 | 13 | 6,282 | .. | .. | 6,295 |
| | Tamarind, soapnuts, gallnuts, etc. | 166 | 105 | 8,029 | .. | .. | 8,134 |
| | Horns, honey, wax, gum, etc. .. | 1 | 21 | 416 | .. | .. | 437 |
| | Avaram, vembadam, etc., barks. | .. | .. | 17,142 | .. | .. | 17,142 |
| | Stones, gravel and earth .. | 22,000 | 34 | 12,235 | .. | .. | 12,267 |
| | Manure leaves, thorns, etc. .. | 324 | 5 | 22,022 | .. | .. | 22,029 |
| | Date, palmyra leaves, etc. .. | .. | .. | 2,003 | 90 | .. | 2,093 |
| | Miscellaneous, including tree-tapping fees. | 2,473 | 287 | 1,33,026 | 2 | 1,054 | 1,34,369 |
| | Total .. | .. | 764 | 4,88,345 | 6,273 | 1,115 | 4,96,497 |
| Western Circle .. | *Reserved forests.* | | | | | | |
| | | NO. | | | | | |
| | Bamboos in number .. .. | 50,466 | 1,905 | 33,720 | 83 | .. | 35,708 |
| | Grazing and fodder grass .. | .. | .. | 78,658 | 870 | .. | 79,528 |
| | *Other produce.* | | | | | | |
| | | QRS. | | | | | |
| | Grass (thatch, korai, etc.) .. | 356 | 48 | 344 | 5 | .. | 397 |
| | Dammer, turmeric, pepper, cardamoms, etc. | 14 | 53 | 1,674 | .. | .. | 1,727 |

(a) Excludes Rs. 9,455 realized from the minor forest produce contractors in the Parlākimedi Maliahs, Ganjām district.

## Outturn of Minor Forest Produce during the year 1916-17—*cont.*

| Circle. | Description of produce. | Produce removed or utilized | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free-grantees. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | *Other produce*—cont. | QRS. | RS. | RS. | RS. | RS. | RS. |
| Western Circle—*cont.* | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | 1,558 | 3,909 | 8,266 | .. | .. | 12,175 |
| | Horns, honey, wax, gum, resin, skins, etc. | 541 | 2,872 | 1,321 | .. | .. | 4,193 |
| | Avaram, vembadam, etc., barks and fibres. | 100 | 25 | 2,878 | .. | .. | 2,903 |
| | Stones, gravel, earth, etc. .. | .. | .. | 1,198 | .. | .. | 1,198 |
| | Manure leaves, thorns, etc. .. | .. | .. | 441 | .. | | 441 |
| | Date and palmyra leaves .. | .. | .. | 60 | .. | .. | 60 |
| | Miscellaneous .. .. .. | 529 | 911 | 12,826 | .. | .. | 13,737 |
| | | 3,098 | 7,818 | 29,008 | 5 | .. | 36,831 |
| | Total .. | .. | 9,723 | 1,41,386 | 958 | .. | 1,52,067 |
| | *Leased forests.* | | | | | | |
| | Bamboos in number .. .. | 61,445 | 3,867 | 1,585 | .. | .. | 5,452 |
| | Grazing and fodder grass .. | .. | .. | 662 | .. | .. | 662 |
| | *Other produce.* | | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | 27 | .. | .. | 27 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | 29 | 49 | 110 | .. | .. | 159 |
| | Horns, honey, wax, gum, resin, skins, etc. | 48 | 156 | .. | .. | .. | 156 |
| | Stones, gravel, earth, etc. .. | .. | .. | 15 | .. | .. | 15 |
| | Miscellaneous .. .. .. | 10 | 21 | .. | .. | .. | 21 |
| | | 87 | 226 | 152 | .. | .. | 378 |
| | Total .. | .. | 4,093 | 2,399 | .. | .. | 6,492 |
| | *Reserved lands.* | | | | | | |
| | *Other produce.* | | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | .. | 3 | .. | 3 |
| | *Unreserved lands.* | | | | | | |
| | Bamboos in number .. .. | .. | .. | 536 | 5 | .. | 541 |
| | *Other produce.* | | | | | | |
| | Catechu .. .. .. .. | 1,252 | 12,474 | .. | .. | .. | 12,474 |
| | Grass (thatch, korai, etc.) .. | .. | .. | 5 | .. | .. | 5 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | .. | .. | 1,054 | .. | .. | 1,054 |
| | Avaram, vembadam, etc., barks and fibres. | .. | .. | 1,824 | .. | .. | 1,824 |
| | Stones, gravel, earth, etc. .. | .. | .. | 491 | 31 | .. | 522 |
| | Manure leaves, thorns, etc. .. | .. | .. | 14 | .. | .. | 14 |
| | Date and palmyra leaves .. | .. | .. | 198 | 6 | .. | 204 |
| | Miscellaneous .. .. .. | .. | .. | 25,302 | .. | .. | 25,302 |
| | | 1,252 | 12,474 | 28,888 | 37 | .. | 41,399 |
| | Total .. | .. | 12,474 | 29,424 | 42 | .. | 41,940 |
| | *Abstract for the Circle.* | | | | | | |
| | Bamboos in number .. .. | 111,911 | 5,772 | 35,841 | 88 | .. | 41,701 |
| | Grazing and fodder grass .. | .. | .. | 79,320 | 870 | .. | 80,190 |
| | Other produce .. .. | 4,437 | 20,518 | 58,048 | 45 | .. | 78,611 |
| | Grand total .. | .. | 26,290 | 1,73,209 | 1,003 | .. | 2,00,502 |
| | Total, Presidency, bamboos .. | NO. 378,369 | 10,607 | 3,05,498 | 987 | 407 | 3,17,499 |
| | Grazing and fodder grass .. | .. | .. | 6,89,635 | 6,592 | 936 | 6,97,163 |
| | Other produce .. .. .. | MDS. 75,572 QRS. 4,437 | 37,794 | 8,62,966 | 574 | 24,186 | 9,25,520 |
| | Grand total, Presidency .. | .. | 48,401 | 18,58,099 | 8,153 | 25,529 | 19,40,182 |

## ANNUAL FORM No. 78.

*Forest Department, Madras Presidency.*

ACCOUNT of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1915–16.

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **TIMBER (CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjām | (*f*) 14,296 | (*g*) 96,456 | (*h*) 110,752 | (*i*) 54,775 | (*j*) 55,977 |
| Vizagapatam | 68 | 2,245 | 2,313 | 685 | 1,628 |
| Gōdāvari, Upper | 2,931 | 38,387 | 41,318 | 29,322 | 11,996 |
| Do. Lower | 327 | 34,999 | 35,326 | 13,711 | 21,615 |
| Kistna | .. | 274 | 274 | 274 | .. |
| Kurnool, East | 2,910 | 9,251 | 12,161 | 10,141 | 2,020 |
| Do. South | 498 | 3,296 | 3,794 | 1,622 | 2,172 |
| Do. West | 14,641 | 86,539 | 101,180 | 88,031 | 13,149 |
| Total | 35,671 | 271,447 | 307,118 | 198,561 | 108,557 |
| *Central Circle.* | | | | | |
| Bellary | 432 | 31 | 463 | 81 | 382 |
| Anantapur | .. | .. | .. | .. | .. |
| Guntūr | .. | 574 | 574 | 574 | .. |
| Cuddapah, West | 1,108 | 256 | 1,364 | 355 | 1,009 |
| Do. East | 1,289 | 16,757 | 18,046 | 17,475 | 571 |
| Nellore | 326 | 1,275 | 1,601 | 1,528 | 73 |
| Chingleput | 64 | 429 | 493 | 393 | 100 |
| Chittoor | .. | 494 | 494 | 494 | .. |
| Total | 3,219 | 19,816 | 23,035 | 20,900 | 2,135 |
| *Southern Circle.* | | | | | |
| Vellore, North | 20 | 65 | 85 | 85 | .. |
| Do. South | 3,904 | 4,926 | 8,830 | 5,923 | 2,907 |
| Arcot, South | 592 | .. | 592 | 443 | 149 |
| Salem, North | 334 | 3,920 | 4,254 | 3,817 | 437 |
| Do. South | 762 | 1,899 | 2,661 | 2,565 | 96 |
| Trichinopoly | 39 | 158 | 197 | 161 | 36 |
| Madura | 1,150 | 2,672 | 3,822 | 3,098 | 724 |
| Tinnevelly | 412 | 3,641 | 4,053 | 1,998 | 2,055 |
| Total | 7,213 | 17,281 | 24,494 | 18,090 | 6,404 |
| *Western Circle.* | | | | | |
| Mangalore, North | 4,676 | 4,567 | 9,243 | 4,454<br>(*a*) 513<br>(*b*) 34 | 4,242 |
| Do. South | 6,857 | 3,961 | 10,818 | 4,331<br>(*a*) 2,806<br>(*b*) 246 | 3,431 |
| Malabar, North | 15,856 | 116,765 | 132,621 | 98,831<br>(*a*) 3,766<br>(*b*) 880<br>(*c*) 418 | 28,726 |
| Do. South | 169,700 | 105,894 | 275,594 | 71,392<br>(*a*) 1,559<br>(*b*) 418 | 202,225 |
| The Nilgiris | 17,616 | 47,898 | 65,514 | 12,018<br>(*b*) 3 | 53,493 |
| Kollegal | 803 | 4,547 | 5,350 | 827<br>(*a*) 352<br>(*b*) 46<br>(*d*) 3,124 | 1,002 |
| Coimbatore, North | 4,398 | 7,469<br>(*d*) 3,124<br>(*c*) 14 | 15,005 | 9 095<br>(*a*) 921<br>(*b*) 2,668<br>(*c*) 31 | 2,290 |
| Do. Central | 1,238 | 2,090 | 3,328 | 1,262<br>(*a*) 383<br>(*b*) 106 | 1,577 |
| Do. South | 383,594 | 15,616 | 399,210 | 45,883<br>(*a*) 1,974<br>(*b*) 219 | 351,134 |
| Total | 604,738 | 311,945 | 916,683 | 268,559 | 648,124 |
| Grand total, Presidency | 650,841 | 620,489 | 1,271,330 | 506,110 | 765,220 |

(*a*) Used departmentally. (*b*) Written off the accounts.
(*c*) Excess or deficit in conversion or measurement. (*d*) Transfers between division.
(*e*) Sent to the Gass Forest Museum.
(*f*) Excludes 119 cubic feet of timber belonging to Parlākimedi Maliahs.
(*g*) Do. 1,602 do. do. do.
(*h*) Do. 1,721 do. do. do.
(*i*) Do. 1,116 do. do. do
(*j*) Do. 605 do. do. do.

## Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1915-16—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **FUEL (CUBIC FEET).** | | | | | |
| ***Northern Circle.*** | | | | | |
| Ganjam | 1,050 | (e) 24,420 | (f) 25,470 | (g) 6,840 | (h) 18,630 |
| Vizagapatam | * 189 | 68,960 | 69,149 | 69,149 | .. |
| Godavari, Upper | 2,401 | 2,808 | 5,209 | 4,224 | 985 |
| Do. Lower | .. | 13,048 | 13,048 | 13,048 | .. |
| Kistna | .. | 10,390 | 10,390 | 10,390 | .. |
| Kurnool, East | .. | 46,450 | 46,450 | 23,970 | 22,480 |
| Do. South | 164,184 | 300 | 164,484 | 164,404 | 80 |
| Do. West | 161,558 | 482,374 | 643,932 | 485,490 | 158,442 |
| Total .. | 329,382 | 648,750 | 978,132 | 777,515 | 200,617 |
| ***Central Circle.*** | | | | | |
| Bellary | 320 | 4,760 | 5,080 | 4,000 | 1,080 |
| Anantapur | .. | .. | .. | .. | .. |
| Guntur | .. | .. | .. | .. | .. |
| Cuddapah, West | 4,300 | 2,400 | 6,700 | 2,100 | 4,600 |
| Do. East | 2,826 | 9,503 | 12,329 | 11,629 | 700 |
| Nellore | 3,679 | 4,587 | 8,266 | 6,596 | 1,670 |
| Chingleput | .. | 2,011 | 2,011 | 2,011 | .. |
| Chittoor | .. | 1,060 | 1,060 | 628 | 432 |
| Total .. | 11,125 | 24,321 | 35,446 | 26,964 | 8,482 |
| ***Southern Circle.*** | | | | | |
| Vellore, North | 41 | 10,618 | 10,658 | 10,652 | 6 |
| Do. South | 6,300 | 1,547 | 7,847 | 7,507 | 340 |
| Arcot, South | 150 / (a)+ 150 | 2,987 | 3,287 | 3,281 | 6 |
| Salem, North | .. | 2,700 | 2,700 | 1,688 | 1,012 |
| Do. South | 105 | .. | 105 | 105 | .. |
| Trichinopoly | 7,440 / (a)— 150 | 22,285 | 29,575 | 28,339 | 1,236 |
| Madura | .. | 4,720 | 4,720 | 220 | 4,500 |
| Tinnevelly | 4,125 | 25,575 | 29,700 | 28,964 | 736 |
| Total .. | 18,160 | 70,432 | 88,592 | 80,756 | 7,836 |
| ***Western Circle.*** | | | | | |
| Mangalore, North | 24,882 | 13,129 / (d) 861 | 38,875 | 14,359 / (c) 972 / 52,516 | 23,544 |
| Do. South | 59,536 | 32,616 | 92,152 | (b) 1,296 / (d) 864 | 37,476 |
| Malabar, North | 21,280 | .. | 21,280 | 12,480 / (b) 8,800 | .. |
| Do. South | 6,164 | 5,930 | 12,094 | 8,122 / (c) 717 / (c) 27 | 3,228 |
| The Nilgiris | 213,205 | 445,508 | 658,713 | 431,977 / (c) 30 | 226,706 |
| Kollegal | 104 980 | 107,500 | 212,480 | 82,380 | 130,100 |
| Coimbatore, North | 28,545 | .. | 28,545 | (c) 28,545 | .. |
| Do. Central | 1,682 | 16,925 | 18,607 | 15,232 / (b) 200 | 3,175 |
| Do. South | 1,155 | .. | 1,155 | 1,115 / (c) 40 | .. |
| Total .. | 46 ,429 | 622,472 | 1,083.901 | 659,672 | 424,229 |
| Grand total, Presidency .. | 820,096 | 1,365,975 | 2,186,071 | 1,544,907 | 641,164 |

* The District Forest Officer, Vizagapatam, reports that the difference between the opening balance of the current year and closing balances of the previous year is due to the conversion of charcoal into its equivalent in fuel as per footnote of the revised Form No. 76. One bag of charcoal is taken as equivalent to 1·6 cubic feet. The factor of conversion of the stacked cubic feet to solid cubic feet is taken as ·4 and all figures altered accordingly in Forms Nos. 78 and 79.

(a) Represents transfer from Trichinopoly to South Arcot on account of Tanjore Range.
(b) Used departmentally.
(c) Written off the account.
(d) Transfers between divisions.
(e) Excludes 19,700 c.ft. of fuel belonging to the Parlakimedi Maliahs.
(f) Do. do. do.
(g) Excludes 11,160 c.ft. do. do.
(h) Do. 8,540 c.ft. do. do.

Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1915-16—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **BAMBOOS (NUMBER).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjām | 600 | 10,645 | 11,245 | 10,245 | 1,000 |
| Vizagapatam | 1,375 | 92,585 | 93,960 | 93,960 | .. |
| Gōdāvari, Upper | 425 | 4,927 | 5,352 | 4,283 | 1,069 |
| Do. Lower | .. | 30,146 | 30,146 | 26,539 | 3,607 |
| Kistna | .. | .. | .. | .. | .. |
| Kurnool, East | 486 | 113,921 | 114,407 | 102,461 | 11,946 |
| Do. South | 1,600 | 4,713 | 6,313 | 6,313 | .. |
| Do. West | .. | 2,900 | 2,900 | 2,900 | .. |
| Total .. | 4,486 | 259,837 | 264,323 | 246,701 | 17,622 |
| *Central Circle.* | | | | | |
| Bellary | 328 | .. | 328 | 328 | .. |
| Anantapur | .. | .. | .. | .. | .. |
| Guntūr | .. | .. | .. | .. | .. |
| Cuddapah, West | .. | .. | .. | .. | .. |
| Do. East | 1,310 | 64 | 1,374 | 954 | 420 |
| Nellore | .. | .. | .. | .. | .. |
| Chingleput | .. | 9 | 9 | .. | 9 |
| Chittoor | .. | 1,700 | 1,700 | 1,700 | .. |
| Total .. | 1,638 | 1,773 | 3,411 | 2,982 | 429 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | 24 | 24 | 24 | .. |
| Do. South | .. | .. | .. | .. | .. |
| Arcot, South | .. | 1,029 | 1,029 | 1,027 | 2 |
| Salem, North | .. | 3,047 | 3,047 | 2,447 | 600 |
| Do. South | 300 | 520 | 820 | 599 | 221 |
| Trichinopoly | .. | .. | .. | .. | .. |
| Madura | .. | .. | .. | .. | .. |
| Tinnevelly | .. | 228 | 228 | 228 | .. |
| Total .. | 300 | 4,848 | 5,148 | 4,325 | 823 |
| *Western Circle.* | | | | | |
| Mangalore, North | 25 | 3,490 | 3,515 | 2,828<br>(*a*) 515 | 172 |
| Do. South | 811 | 737 | 1,548 | 550<br>(*a*) 12<br>(*b*) 836 | 150 |
| Malabar, North | 4,320 | 14,616 | 18,936 | 18,497<br>(*a*) 389<br>(*b*) 50 | .. |
| Do. South | 24,639 | 75,144 | 99,783 | 46,257<br>(*a*) 2,146<br>(*b*) 107 | 51,273 |
| Kollegal | 18,614 | 12,272 | 30,886 | 30,260<br>(*a*) 300<br>(*b*) 40 | 286 |
| Coimbatore, North | .. | 2,450 | 2,450 | 2,420 | 30 |
| Do. Central | 210 | 3,202 | 3,412 | 3,412 | .. |
| Total .. | 48,619 | 111,911 | 160,530 | 108,609 | 51,921 |
| Grand total, Presidency .. | 55,043 | 378,369 | 433,412 | 362,617 | 70,795 |

(*a*) Used departmentally. (*b*) Written off the accounts.

Account of timber and other produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1915-16—*cont.*

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance on hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **MINOR PRODUCE (MAUNDS OF 28 LB.).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam .. .. .. .. .. | 3 | † 155 | ‡ 158 | 75 | § 83 |
| Vizagapatam .. .. .. .. | 5,433 | 2,057 | 7,490 | 7,478 | 12 |
| Godavari, Upper .. .. .. | 40,163 | 8,125 | 48,288 | 11,563 | 36,725 |
| Do. Lower .. .. .. .. | .. | 1,087 | 1,087 | 1,087 | .. |
| Kistna .. .. .. .. .. | 202 | 408 | 610 | 436 | 174 |
| Kurnool, East .. .. .. .. | 1,776 | 7,905 | 9,681 | 8,683 | 998 |
| Do. South .. .. .. .. | .. | 4 813 | 4.813 | 4,813 | .. |
| Do. West .. .. .. .. | 720 | 13,649 | 14,369 | 5,021 | 9,348 |
| Total .. | 48,297 | 38,199 | 86,496 | 39,156 | 47,340 |
| *Central Circle.* | | | | | |
| Bellary .. .. .. .. .. | .. | .. | .. | .. | .. |
| Anantapur .. .. .. .. .. | 8 | 12 | 20 | 18 | 2 |
| Guntur .. .. .. .. .. | 865 | .. | 865 | 865 | .. |
| Cuddapah, West .. .. .. .. | .. | .. | .. | .. | .. |
| Do. East .. .. .. .. | * 240 | 3,231 | 3,471 | 2,827 | 644 |
| Nellore .. .. .. .. .. | 884 | 4,907 | 5,791 | 3,544 | 2,247 |
| Chingleput .. .. .. .. .. | .. | .. | .. | .. | .. |
| Chittoor .. .. .. .. .. | .. | .. | .. | .. | .. |
| Total .. | 1,997 | 8,150 | 10,147 | 7,254 | 2,893 |
| *Southern Circle.* | | | | | |
| Vellore, North .. .. .. .. | 245 | 152 | 397 | 336 | 61 |
| Do. South .. .. .. .. | .. | 87 | 87 | 21 | 66 |
| Arcot, South .. .. .. .. | 493 (a) + 6 | 2,349 | 2,848 | 2,788 | 60 |
| Salem, North .. .. .. .. | .. | .. | .. | .. | .. |
| Do. South .. .. .. .. | .. | .. | .. | .. | .. |
| Trichinopoly .. .. .. .. | 328 (a) — 6 | 36 | 358 | 358 | .. |
| Madura .. .. .. .. .. | .. | 10 | 10 | 10 | .. |
| Tinnevelly .. .. .. .. .. | 3 | 23,589 | 23,592 | 23,266 | 326 |
| Total .. | 1,069 | 26,223 | 27,292 | 26,779 | 513 |
| *Western Circle.* | | | | | |
| Mangalore, North .. .. .. .. | .. | 1,332 (e) 12 | 1,344 | 1,220 (b) 80 (d) 12 | 32 |
| Do. South .. .. .. .. | .. | 20 | 20 | (e) 12 | 8 |
| Malabar, North .. .. .. .. | 5 | .. | 5 | 5 | .. |
| Do. South .. .. .. .. | .. | (f) . | (e) .. | .. | (f) .. |
| The Nilgiris .. .. .. .. | 1 | 697 | 698 | 302 (b) 356 | 40 |
| Kollegal .. .. .. .. .. | 1,834 | 1,167 | 3,001 | 2,546 (e) 8 | 447 |
| Coimbatore, North .. .. .. .. | 1,597 | 251 | 1,848 | 1,728 (e) 49 | 71 |
| Do. Central .. .. .. | 5 | 77 (e) 32 | 114 | 72 | 42 |
| Do. South .. .. .. | 102 | 893 | 995 | 709 (e) 32 | 254 |
| Total .. | 3,544 | 4,481 | 8,025 | 7,131 | 894 |
| Grand total, Presidency .. | 54,907 | 77,053 | 131,960 | 80,320 | 51,640 |

* Revised figure.
(†) Excludes 47 quarters of minor forest produce belonging to the Parlakimedi maliahs.
(‡) Do. do. do. do.
(§) Do. do. do. do.
(a) Represents transfer from Trichinopoly to South Arcot on account of Tanjore Range.
(b) Used departmentally. (e) Written off the accounts.
(d) Sent to the Madras Industrial Exhibition. (e) Transfers between divisions.
(f) Two hundred and eighty-seven cocoanuts and 4 ivory pieces

## ANNUAL FORM No. 79.

*Forest Department, Madras Presidency.*

STATEMENT showing the value of timber and other produce at sale depôts for 1915-16.

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year |
| | *Northern Circle.* | | | Rs. | | | Rs. | Rs. | Rs. |
| Ganjam .. | Timber .. .. | .. | (a) 9,025 | (b) 6,209 | .. | (c) 8,813 | (d) 5,758 | (e) .. | 451 |
| | Fuel .. .. | .. | .. | .. | .. | (f) 480 | (g) 12 | (h) 12 | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 3 | .. | 36 | MDS. 82 | (i) .. | (j) 1,149 | (j) 1,113 | .. |
| Vizagapatam. | Timber .. .. | .. | 68 | 20 | .. | 1,628 | 1,049 | 1,029 | .. |
| | Fuel .. .. | .. | * 18 | 59 | .. | .. | . | . | 59 |
| | Bamboos .. | 1,375 | .. | 32 | .. | .. | .. | .. | 32 |
| | Minor produce .. | .. | .. | .. | MDS. 12 | .. | 5 | 5 | .. |
| Gōdāvari, Upper. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gōdāvari, Lower. | Timber .. .. | .. | .. | . | | 21,615 | 10,875 | 10,875 | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | 3,607 | .. | 67 | 67 | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kistna .. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | . |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | . |
| Kurnool, East. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | . |
| Kurnool, South. | Timber .. .. | .. | 498 | 527 | .. | 2,172 | 827 | 300 | .. |
| | Fuel .. .. | .. | 164,184 | 6,552 | .. | 80 | 3 | .. | 6,549 |
| | Bamboos .. | 1,600 | .. | 21 | .. | .. | .. | .. | 21 |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, West. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | 1,469 | 275 | .. | 1,454 | 242 | .. | 33 |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 637 | .. | 288 | MDS. 4,990 | .. | 806 | 518 | .. |
| | *Central Circle.* | | | | | | | | |
| Nellore .. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | . |
| | Minor produce .. | MDS. 884 | .. | 720 | MDS. 2,213 | .. | 1,049 | 329 | .. |
| | *Southern Circle.* | | | | | | | | |
| Vellore, North. | Timber .. .. | .. | 20 | 4 | .. | .. | .. | .. | 4 |
| | Fuel .. .. | .. | 40 | 2 | .. | 6 | 3 | 1 | .. |
| | Minor produce .. | MDS. 191 | .. | 84 | MDS. 61 | .. | 78 | .. | 6 |
| Vellore, South. | Timber .. .. | .. | 2,939 | 47,024 | .. | 2,318 | 48,238 | 1,214 | .. |
| | Fuel .. .. | .. | 400 | 25 | .. | .. | .. | .. | 25 |
| Arcot, South. | Fuel .. .. | .. | † 150 | 3 | .. | .. | .. | .. | 3 |
| | Minor produce .. | MDS. † 6 | .. | 3 | .. | .. | .. | .. | 3 |
| Salem, North. | Timber .. .. | .. | 334 | 1,272 | .. | 437 | 2,015 | 743 | .. |
| | Fuel .. .. | .. | .. | .. | .. | 1,012 | 11 | 11 | .. |
| | Bamboos .. | .. | .. | .. | 600 | .. | 30 | 30 | .. |
| Salem, South. | Timber .. .. | .. | 762 | 956 | .. | 96 | 319 | . | 637 |
| | Fuel .. .. | . | 105 | 2 | .. | .. | .. | .. | 2 |
| | Bamboos .. | 300 | .. | 7 | 221 | .. | 5 | .. | 2 |

* Please vide remark in Form No 78.

† Relates to Tanjore Range transferred from Trichinopoly to South Arcot.

(a) Excludes 119 cft. belonging to Parlakimedi Maliahs. (f) Excludes 8,540 cft. belonging to Parlakimedi Maliahs.
(b) Do. Rs. 166 do. do. (g) Do Rs. 250 do. do.
(c) Do. 605 cft. do. do. (h) Do. Rs. 250 do. do.
(d) Do. Rs. 500 do. do. (i) Do 47 quarters do. do.
(e) Do. Rs. 334 do. do (j) Do. Rs. 900 do. do.

## Statement showing the value of timber and other produce at sale depôts for 1915-16—*cont.*

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Southern Circle*—cont. | | | RS. | | | RS. | RS. | RS. |
| Trichinopoly | Timber .. .. | .. | 39 | 589 | .. | 36 | 17 | .. | 572 |
| | Fuel .. .. | .. | 7,440<br>*— 150 | 275<br>— 3 | .. | 1,236 | 30 | .. | 242 |
| | Minor produce .. | MDS.<br>328<br>*—6 | .. | 155<br>— 3 | .. | .. | .. | .. | 152 |
| Madura .. | Timber .. .. | .. | 1,150 | 424 | .. | 724 | 215 | .. | 209 |
| | Fuel .. .. | .. | .. | .. | .. | 4,500 | 281 | 281 | .. |
| Tinnevelly .. | Timber .. .. | .. | 412 | 784 | .. | 2,055 | 807 | 23 | .. |
| | Fuel .. .. | .. | 4,125 | 237 | .. | 736 | 15 | .. | 222 |
| | Minor produce .. | MDS.<br>3 | .. | 11 | MDS.<br>826 | .. | 29 | 18 | .. |
| | *Western Circle.* | | | | | | | | |
| North Mangalore. | Timber .. .. | .. | 2,345 | 1,890 | .. | 2,722 | 2,351 | 461 | .. |
| | Bamboos .. .. | .. | .. | .. | 172 | .. | 19 | 19 | .. |
| North Malabar. | Timber .. .. | .. | 1,401 | 1,009 | .. | 232 | 116 | .. | 893 |
| | Fuel .. .. | .. | 2,240 | 196 | .. | .. | .. | .. | 196 |
| | Bamboos .. | 1,441 | .. | 130 | .. | .. | .. | .. | 130 |
| | Minor produce .. | QRS.<br>5 | .. | 228 | .. | .. | .. | .. | 228 |
| South Malabar. | Timber .. .. | .. | 75 | 94 | .. | 335 | 26 | .. | 68 |
| | Fuel .. .. | .. | .. | .. | .. | 22 | 5 | 5 | .. |
| | Bamboos .. .. | .. | .. | .. | 9,808 | .. | 495 | 495 | .. |
| | Minor produce .. | .. | .. | .. | (*b*) | .. | 9 | 9 | .. |
| The Nilgiris. | Timber .. .. | .. | 330<br>(*a*) 17,229 | 161<br>6,792 | .. | 53,493 | 23,215 | 16,262 | .. |
| | Fuel .. .. | .. | 28,958 | 2,461 | .. | 36,267 | 3,077 | 616 | .. |
| | Minor produce .. | .. | .. | .. | QRS.<br>40 | .. | 240 | 240 | .. |
| Kollegal .. | Timber .. .. | .. | 660 | 360 | .. | 900 | 225 | .. | 135 |
| | Bamboos .. .. | 10,052 | .. | 758 | 56 | .. | 1 | .. | 757 |
| | Minor produce .. | QRS.<br>1,304 | .. | 1,530 | QRS.<br>370 | .. | 740 | .. | 790 |
| North Coimbatore. | Timber .. .. | .. | 849 | 5,713 | .. | 471 | 3,010 | .. | 2,703 |
| | Minor produce .. | QRS.<br>1,597 | .. | 2,243 | QRS.<br>71 | .. | 500 | .. | 1,743 |
| Central Coimbatore. | Minor produce . | QRS.<br>5 | .. | 401 | .. | .. | .. | .. | 401 |
| South Coimbatore. | Timber .. .. | .. | 240 | 295 | .. | 28,402 | 33,544 | 33,249 | .. |
| | Minor produce .. | .. | .. | .. | QRS.<br>251 | .. | 574 | 574 | .. |
| | ABSTRACT. | | | | | | | | |
| Northern Circle. | Timber .. .. | .. | 9,591 | 6,756 | .. | 34,228 | 18,509 | 11,753 | .. |
| | Fuel .. .. | .. | 165,842 | 6,886 | .. | 2,014 | 257 | .. | 6,629 |
| | Bamboos .. | 2,975 | .. | 53 | 3,607 | .. | 67 | 14 | .. |
| | Minor produce .. | MDS.<br>640 | .. | 324 | MDS.<br>5,084 | .. | 1,960 | 1,636 | .. |
| | Total value .. | .. | .. | 14,019 | .. | .. | 20,793 | 6,774 | .. |
| Central Circle. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS.<br>884 | .. | 720 | MDS.<br>2,213 | .. | 1,049 | 329 | .. |
| Southern Circle. | Timber .. .. | .. | 5,656 | 51,053 | .. | 5,666 | 51,611 | 558 | .. |
| | Fuel .. .. | .. | 12,110 | 541 | .. | 7,490 | 340 | .. | 201 |
| | Bamboos .. | 300 | .. | 7 | 881 | .. | 35 | 28 | .. |
| | Minor produce .. | MDS.<br>522 | .. | 250 | MDS.<br>387 | .. | 107 | .. | 143 |
| | Total value .. | .. | .. | 51,851 | .. | .. | 52,093 | 242 | .. |
| Western Circle. | Timber .. .. | .. | 23,129 | 16,314 | .. | 86,555 | 62,487 | 46,173 | .. |
| | Fuel .. .. | .. | 31,198 | 2,657 | .. | 36,229 | 3,082 | 425 | .. |
| | Bamboos .. | 11,493 | .. | 888 | 10,036 | .. | 515 | .. | 373 |
| | Minor produce .. | QRS.<br>2,911 | .. | 4,402 | QRS.<br>732 | .. | 2,063 | .. | 2,339 |
| | Total value .. | .. | .. | 24,261 | .. | .. | 68,147 | 43,886 | .. |
| | Grand Total, Presidency. | .. | .. | 90,851 | .. | .. | 1,42,082 | 51,231 | .. |

* Relates to Tanjore Range transferred from Trichinopoly to South Arcot.

(*a*) Omitted to be shown in the last year's return by the District Forest Officer.

(*b*) Two hundred and eigty-seven cocoanuts.

ANNUAL

*Forest Department,*

SUMMARY of Revenue of the different districts

| Head of account. | Northern Circle. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Ganjam. | Vizagapatam. | Gódávari, Upper. | Gódávari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool, West. |
| *Receipts.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Timber, etc., removed by Government Agency— | | | | | | | | | |
| (*a*) Timber .. .. .. | 16 | 10,529 | 61 | 15,557 | 14 | .. | 4,808 | 858 | 20,855 |
| (*b*) Firewood and charcoal .. | 69 | 83 | 2,865 | 131 | 1,028 | 7 | 523 | 2,761 | 10,758 |
| (*c*) Bamboos .. .. .. | .. | 4 | 2,085 | 4 | .. | .. | 1,889 | 9 | 10 |
| (*d*) Sandalwood .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce. | 55 | 51 | .. | 2 | 40 | 880 | 4,363 | .. | 2,956 |
| II. Timber, etc., removed by consumers or purchasers— | | | | | | | | | |
| (*a*) Timber .. .. .. | 23 | 22,090 | 2,282 | 1,756 | 41,180 | 4,203 | 2,421 | 13,121 | 1,858 |
| (*b*) Firewood and charcoal .. | .. | 12,028 | 2,925 | 508 | 38,390 | 21,778 | 1,266 | 13,282 | 12,164 |
| (*c*) Bamboos .. .. .. | .. | 4,549 | 8,522 | 16,666 | 75,526 | 4,351 | 4,969 | 13,379 | 10,518 |
| (*d*) Grazing and fodder grass.. | .. | 8,971 | 5,390 | 10,591 | 15,065 | 13,663 | 32,742 | 9,455 | 23,128 |
| (*e*) Other minor produce .. | 186 | 2,258 | 13,000 | 709 | 27,095 | 14,800 | 8,586 | 10,842 | 36,231 |
| (*f*) Rents for trees tapped .. | .. | 1,279 | 1,852 | .. | 8,188 | 13,263 | 1,258 | 2,096 | 12,088 |
| (*g*) Other items .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*h*) Commutation fees .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| III. Confiscated forest produce, drift and waif-wood. | .. | 375 | 201 | 532 | 4,294 | 140 | 321 | 1,176 | 848 |
| IV. Forests not managed by Government— | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | |
| (*a*) Fines and forfeitures .. | .. | 2,137 | 2,825 | 286 | 7,889 | 3,331 | 5,769 | 7,732 | 6,319 |
| (*b*) Other sources .. .. .. | 127 | 1,856 | 376 | 487 | 7,255 | 1,564 | 734 | 1,553 | 1,921 |
| Total, Revenue .. | 476 | (*a*)66,310 | 42,384 | 47,229 | 2,25,964 | 77,480 | 69,144 | 76,264 | 1,39,654 |

| Budget heads. | Southern Circle. | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Vellore, North. | Vellore, South. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. | Tinnevelly. |
| *Receipts.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | 40 | 40 | 8 | 2,646 | 860 | .. | — 5 | 173 |
| (*b*) Firewood and charcoal .. | .. | 444 | 14 | 158 | 81 | 14 | 1,011 | 20 | 720 |
| (*c*) Bamboos .. .. .. | .. | 1 | .. | 115 | 150 | .. | .. | .. | 29 |
| (*d*) Sandalwood .. .. | 59,800 | .. | 69,015 | .. | 1 | 14 | 313 | .. | .. |
| (*e*) Grass and other minor produce. | .. | 156 | .. | 52 | .. | .. | 156 | 124 | 43 |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | 12,869 | 7,083 | 5,301 | 10,839 | 9,624 | 8,964 | 5,919 | 2,999 |
| (*b*) Firewood and charcoal .. | .. | 19,929 | 15,455 | 43,839 | 8,220 | 13,207 | 37,065 | 37,412 | 81,587 |
| (*c*) Bamboos .. .. .. | .. | 12,483 | 34,868 | 446 | 24,254 | 38,958 | 5,047 | 2,410 | 410 |
| (*d*) Grazing and fodder grass .. | .. | 19,795 | 25,675 | 21,226 | 32,514 | 20,024 | 24,076 | 20,650 | 5,507 |
| (*e*) Other produce .. .. | 594 | 30,441 | 14,940 | 22,974 | 22,623 | 25,920 | 18,910 | 30,067 | 24,717 |
| (*f*) Rents for trees tapped .. | .. | 7,770 | 2,021 | 2,249 | 1,940 | 318 | 10 | .. | .. |
| (*g*) Other items .. .. | .. | .. | .. | 41 | 798 | .. | .. | .. | .. |
| (*h*) Commutation fees .. .. | .. | .. | .. | .. | .. | 606 | .. | .. | .. |
| III. Confiscated drift and waif-wood .. | .. | 128 | 231 | 426 | 232 | 250 | 136 | 1,966 | 1,046 |
| IV. Revenue from forest not managed by Government— | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | |
| (*a*) Fines and forfeitures .. | .. | 11,479 | 9,965 | 12,387 | 7,365 | 8,889 | 7,884 | 6,799 | 5,621 |
| (*b*) Other sources .. .. .. | 149 | 845 | 923 | 1,083 | 1,127 | 6,298 | 621 | 1,085 | 2,072 |
| Total, Receipts .. | 60,543 | 1,16,380 | 1,80,230 | 1,10,305 | 1,12,790 | 1,24,982 | 1,04,193 | 1,06,447 | 1,24,924 |

NOTE.—Revenue under Direction is distributed as follows:—
I. (*d*) Vellore, South, Rs. 13,273; Salem, North, Rs. 30,559; Salem, South, Rs. 11,687; and Trichinopoly, Rs. 4,281.
II. (*e*) Vellore, North, Rs. 594.
V. (*b*) Vellore, South, Rs. 2; Salem, North, Rs. 69; and Madura, Rs. 178.
(*a*) Excludes Rs. 16,261-12-3 being revenue realized in Parlakimedi Maliahs.

FORM No. 80.

*Madras Presidency.*

for the Forest year 1915-16.

| Total. | Central Circle. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, West. | Cuddapah, East. | Nellore. | Chingleput. | Chittoor. | Total. |
| Rs. | Rs. | Rs. | Rs. | Rs | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 52,198 | .. | 2 | .. | 133 | 75 | 731 | 4 | .. | 4 | 949 |
| 18,225 | .. | 137 | .. | .. | 47 | 101 | — 2,950 | 56 | 42 | — 2,567 |
| 4,001 | .. | .. | 14 | 1 | .. | .. | .. | .. | .. | 15 |
| .. | .. | 130 | .. | .. | .. | .. | .. | .. | 5 | 135 |
| 7,847 | .. | .. | .. | 34 | .. | 10 | 8,312 | .. | 1 | 8,357 |
| 88,934 | | | | | | | | | | |
| 1,02,341 | .. | 9,519 | 15,912 | 16,645 | 9,605 | 12,780 | 5,529 | 7,291 | 11,235 | 88,516 |
| 1,38,580 | .. | 10,912 | 7,281 | 46,374 | 12,601 | 17,269 | 46,377 | 14,892 | 14,115 | 1,69,821 |
| 1,19,005 | .. | 475 | .. | .. | 2,980 | 6,501 | 8 | 33 | 6,263 | 16,260 |
| 1,13,707 | .. | 38,549 | 32,472 | 1,04,586 | 17,767 | 16,993 | 74,650 | 10,497 | 23,263 | 3,18,777 |
| 40,019 | .. | 82,842 | 1,30,366 | 16,529 | 16,059 | 9,790 | 42,470 | 12,777 | 45,290 | 3,56,123 |
| .. | .. | 28,931 | 15,606 | 8,624 | 1,746 | 1,750 | 8,425 | 4,373 | 5,134 | 74,589 |
| .. | .. | .. | .. | .. | .. | 474 | .. | .. | .. | 474 |
| 7,887 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | .. | 116 | 177 | 610 | 685 | 750 | 768 | 186 | 123 | 3,415 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 36,288 | .. | 8,984 | 8,547 | 21,956 | 6,978 | 10,330 | 15,301 | 6,078 | 5,886 | 84,060 |
| 15,873 | 193 | 802 | 490 | 2,340 | 704 | 1,263 | 52,949 | 523 | 2,788 | 62,052 |
| 7,44,905 | 193 | 1,81,399 | 2,10,865 | 2,17,832 | 69,247 | 78,742 | 2,51,843 | 56,706 | 1,14,149 | 11,80,976 |

| Total. | Western Circle. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Direction | South Canara. * | North Mangalore. † | South Mangalore. † | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working Plan Office. | Total. |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | | Rs. |
| 3,762 | .. | 3,862 | 47 | 309 | 93,119 | 1,37,514 | (b) 17,602 | 205 | 439 | 356 | 47,638 | .. | 3,01093 |
| 2,462 | .. | 3,622 | 63 | .. | 374 | 420 | 38,410 | 2,556 | .. | 787 | 31 | .. | 46,261 |
| 295 | .. | 417 | .. | .. | 2,061 | 6,097 | .. .. | 534 | .. | 45 | .. | .. | 9,154 |
| 1,29,143 | (a) 34,812 | 390 | .. | .. | .. | .. | 6,051 | .. | (a) 76,712 | 13 | .. | .. | 1,17978 |
| 531 | .. | 12,150 | .. | .. | 187 | .. | 674 | 3,747 | 2,658 | 46 | 1,311 | .. | 20773 |
| 63,598 | .. | 19,452 | 2,648 | 1,169 | 2,066 | 1,533 | 847 | 2,379 | 4,555 | 3,816 | 1,272 | .. | 39,737 |
| 2,56,714 | .. | 16,388 | 1,652 | 348 | 350 | 19 | 2,232 | 778 | 10,575 | 23,423 | 7,596 | .. | 63,361 |
| 1,18,876 | .. | 2,400 | 208 | 213 | 197 | 702 | 2,047 | 968 | 20,276 | 6,309 | 2,449 | .. | 35,769 |
| 1,69,467 | .. | 11,476 | .. | 1 | 2,700 | 2 | 10,151 | 19,201 | 25,942 | 7,636 | 2,213 | .. | 79,322 |
| 1,91,186 | .. | 21,318 | 444 | 311 | 5,372 | 2,074 | (d) 2,979 | 2,946 | 7,161 | 9,478 | 6,163 | .. | 58,246 |
| 14,308 | .. | 1,193 | 3 | 7 | .. | .. | .. | 24 | .. | 13 | .. | .. | 1,240 |
| 839 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 606 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 4,415 | .. | 2,728 | 82 | 81 | 212 | 1 | 33 | 34 | 101 | 469 | 165 | .. | 3,906 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 70,389 | .. | 10,553 | 1,947 | 327 | 423 | 476 | 1,099 | 2,578 | 6,474 | 5,429 | 1,915 | .. | 31,261 |
| 14,203 | 1,18,624 | 5,238 | 484 | 130 | 9,592 | (c) 9,854 | 6,194 | 1,738 | 3,000 | 2,264 | 6,581 | .. | 1,63,699 |
| 10,40,794 | 1,53,436 | 1,11,187 | 7,578 | 2,896 | 1,16,653 | 1,58,692 | 88,319 | 37,688 | 1,57,893 | 60,084 | 77,374 | .. | 9,71,800 |

* Up to 15th May 1916. † From 16th May 1916 to the close of the year.

The Revenue under *Direction* is distributed as follows :—

V. (*b*) *North Malabar*, Rs. 7 ; *South Malabar*, Rs. 9,041 ; *The Nilgiris*, Rs. 25,301 ; *Kollegal*, Re. 1 ; *North Coimbatore*, Rs. 6 ; *South Coimbatore*, Rs. 84,157 ; *Direction*, Rs. 111.

(*a*) I (*d*) Out of Rs. 1,11,524 credited under *Direction* and *North Coimbatore*, Rs. 52,290 appertain to *Kollegal* and Rs. 59,234 to *North Coimbatore*.

(*b*) Includes Rs. 6,009 appertaining to *South Coimbatore*.

(*c*) Includes Rs. 7,145 appertaining to *the Nilgiris*.

(*d*) Includes Rs. 1,027 appertaining to *Central Coimbatore*.

SUMMARY of expenditure of the different districts for the Forest year 1915-16.

| Head of account. | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool West. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| NORTHERN CIRCLE. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1. Refunds and drawbacks— | | | | | | | | | | |
| Forest refunds .. .. .. .. .. | .. | 568 | 24 | 69 | 65 | 904 | 259 | 206 | 364 | 2,459 |
| *A. Conservancy and Works.* | | | | | | | | | | |
| I. Timber, etc., removed by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. .. .. .. | .. | 4,455 | 174 | 4,434 | .. | 367 | 1,658 | 93 | 12,021 | 23,202 |
| (*b*) Firewood and charcoal .. .. | .. | 200 | 1,456 | 92 | 158 | 265 | 435 | .. | 6,180 | 8,786 |
| (*c*) Bamboos .. .. .. .. .. | .. | 50 | 820 | 3 | . | .. | 1,107 | — 1 | 9 | 1,988 |
| (*d*) Sandalwood .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce .. | .. | 798 | .. | 35 | 11 | 203 | 2,942 | 100 | 3,908 | 7,997 |
| II. Timber, etc., removed by consumers, etc. .. | .. | 5,657 | 4,378 | 3,473 | 12,169 | 1,314 | 6,061 | 6,354 | 9,214 | 48,650 |
| III. Confiscated forest produce, drift and waif-wood. | .. | 24 | .. | .. | 1,702 | 2 | 2 | 36 | 62 | 1,835 |
| IV. Forests not managed by Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests, etc. .. .. .. | .. | .. | 474 | .. | .. | .. | .. | .. | .. | 474 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | |
| (*a*) Purchase of cattle .. .. .. | .. | .. | .. | .. | .. | .. | 20 | .. | .. | 20 |
| (*b*) Feed and keep of cattle .. .. | .. | 3,402 | 1,126 | 1,786 | .. | 4 | .. | 356 | 3,433 | 10,107 |
| (*c*) Stores, tools and plant .. .. .. | 109 | 76 | 214 | 2,410 | 5,319 | 1,021 | 896 | 121 | 304 | 10,270 |
| VII. Communications and buildings— | | | | | | | | | | |
| (*a*) Roads and bridges .. .. .. | .. | 4,372 | 259 | 2,804 | 2,016 | 2,682 | 11,336 | 5,443 | 2,550 | 31,462 |
| (*b*) Buildings .. .. .. .. .. | .. | 6,855 | 1,522 | 1,502 | 5,103 | 679 | 6,167 | 2,569 | 2,252 | 26,649 |
| (*c*) Other works .. .. .. .. | .. | 94 | .. | 931 | 816 | 30 | 937 | 172 | 558 | 3,538 |
| VIII. Organization, improvement and extension of forests— | | | | | | | | | | |
| (*a*) Demarcation .. .. .. .. | .. | 570 | 395 | 962 | 1,120 | 199 | 298 | 324 | 604 | 4,402 |
| (*b*) Cost of forests settlements, compensation for lands and rights. | .. | 57 | .. | .. | 136 | .. | .. | .. | .. | 193 |
| (*c*) Surveys— | | | | | | | | | | |
| (1) Local surveys .. .. .. | 37 | 641 | 119 | 1,564 | 1,266 | 1,013 | 1,167 | 1,631 | 822 | 8,260 |
| (2) Surveys of India .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans .. .. .. .. | .. | 26 | .. | .. | 14 | .. | .. | .. | 57 | 97 |
| (*e*) Sowing and planting .. .. .. | 896 | 113 | 10 | 134 | .. | 540 | 516 | 661 | 21,838 | 24,708 |
| (*f*) Protection from fire .. .. .. | .. | 5,020 | 1,613 | 7,910 | 5,035 | 1,430 | 11,332 | 11,660 | 13,442 | 57,442 |
| (*g*) Other works .. .. .. .. | .. | 72 | 10 | .. | 1,841 | 5,912 | 2,732 | 1,697 | 3,971 | 16,135 |
| IX. Miscellaneous— | | | | | | | | | | |
| (*a*) Law charges .. .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Other charges .. .. .. .. | 443 | 451 | 9 | .. | 14 | 102 | 197 | 212 | 399 | 1,827 |
| Total, A. Conservancy and Works .. | 1,485 | (*a*) 32,933 | 12,509 | 28,040 | 36,727 | 15,793 | 47,303 | 31,428 | 81,824 | 2,88,042 |
| *B. Establishments.* | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (*a*) Conservators .. .. .. .. .. | 21,737 | .. | .. | .. | .. | .. | .. | 60 | .. | 21,797 |
| (*b*) Superior officers .. .. .. .. | 7,473 | 13,042 | 3,450 | 8,830 | 8,605 | 7,606 | 6,000 | 7,694 | 11,604 | 74,304 |
| (*c*) Subordinate establishments, etc. .. .. | 616 | 21,444 | 8,665 | 14,699 | 16,157 | 8,652 | 16,686 | 20,969 | 20,699 | 1,28,581 |
| (*d*) Office establishments .. .. .. | 9,617 | 8,057 | 4,042 | 5,276 | 7,043 | 3,778 | 5,058 | 5,906 | 7,252 | 56,029 |
| (*e*) Deputation, etc., allowances .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | |
| (*a*) Conservators .. .. .. .. .. | 2,620 | 618 | .. | 200 | .. | 285 | .. | .. | .. | 3,723 |
| (*b*) Superior officers .. .. .. .. | 545 | 3,051 | 1,423 | 1,587 | 1,279 | 1,480 | 1,625 | 1,962 | 2,636 | 15,588 |
| (*c*) Subordinate establishments, etc. .. .. | 105 | 5,817 | 1,979 | 4,554 | 4,955 | 2,799 | 5,350 | 7,298 | 6,550 | 39,407 |
| (*d*) Office establishment .. .. .. | 1,189 | 2,268 | 880 | 1,496 | 1,175 | 1,141 | 1,749 | 1,072 | 1,657 | 12,627 |
| III. Contingencies— | | | | | | | | | | |
| (*a*) Rents, rates and taxes .. .. .. | 133 | 131 | 22 | 246 | 432 | 158 | 22 | 58 | 108 | 1,310 |
| (*b*) Official postage and service telegrams .. | 1,030 | 1,396 | 750 | 991 | 1,124 | 1,125 | 921 | 872 | 1,457 | 9,666 |
| (*c*) Telephone charges .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sundries .. .. .. .. .. | 4,958 | 1,993 | 1,234 | 1,522 | 3,058 | 1,286 | 1,849 | 1,512 | 1,197 | 18,609 |
| Total, B. Establishments .. | 50,017 | 57,817 | 22,445 | 39,401 | 43,828 | 28,310 | 39,260 | 47,403 | 53,160 | 3,81,641 |
| Grand Total of Expenditure A and B .. | 51,502 | (*b*) 90,750 | 34,954 | 67,441 | 80,555 | 44,103 | 86,563 | 78,831 | 1,34,984 | 6,69,683 |

(*a*) Excludes Rs. 9,804-15-7 spent under A. Conservancy works in Parlakimedi Maliahs.
(*b*) Excludes Rs. 23,457-1-10 spent under B. Establishment in Parlakimedi Maliahs.

Summary of expenditure of the different districts for the Forest year 1915–16—*cont.*

| Budget heads. | Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, West. | Cuddapah, East. | Nellore. | Chingleput. | Chittoor. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| CENTRAL CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks | .. | 1,835 | 377 | 1,650 | 610 | 352 | 1,628 | 328 | 1,824 | 8,604 |
| *A. Conservancy and Works.* | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber | .. | .. | .. | 12 | .. | .. | .. | .. | .. | 12 |
| (*b*) Firewood and charcoal | .. | 105 | .. | .. | .. | 5 | .. | .. | 7 | 117 |
| (*c*) Bamboos | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sandalwood | .. | 124 | .. | .. | .. | .. | .. | .. | .. | 124 |
| (*e*) Grass and other minor produce | .. | .. | .. | .. | .. | 42 | 2,070 | .. | .. | 2,112 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | 2,993 | 1,771 | 4,304 | 4,366 | 9,237 | 2,422 | 3,219 | 2,538 | 30,850 |
| III. Confiscated drift and waif-wood | .. | 2 | 4 | .. | 14 | 26 | .. | .. | 7 | 53 |
| IV. Forests not managed by Government— | | | | | | | | | | |
| (*a*) Shared and private forests | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | 8,000 | .. | .. | .. | .. | .. | .. | .. | 8,000 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | |
| (*a*) Purchase of cattle | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Feed and keep of cattle | .. | .. | .. | .. | .. | .. | .. | 29 | .. | 29 |
| (*c*) Stores, tools and plant | 133 | 179 | — 178 | 155 | 126 | 234 | 1,784 | 151 | 440 | 3,024 |
| VII. Communications and buildings— | | | | | | | | | | |
| (*a*) Roads and bridges | .. | 870 | 731 | 275 | 1,519 | 5,288 | 1,691 | 857 | 1,950 | 13,181 |
| (*b*) Buildings | .. | 865 | 2,753 | 1,317 | 2,841 | 7,124 | 2,962 | 1,412 | 3,187 | 22,461 |
| (*c*) Other works | .. | 30 | 98 | 186 | 168 | 290 | 12 | 74 | 8 | 866 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | |
| (*a*) Demarcation | .. | 270 | 1,183 | 481 | 294 | 1,483 | 967 | 499 | 1,628 | 6,805 |
| (*b*) Cost of forest settlement ; compensation for land and rights. | .. | .. | 462 | .. | 152 | 781 | — 73 | .. | .. | 1,322 |
| (*c*) Surveys — Local | 892 | 1,516 | 486 | 380 | 375 | 610 | 1,019 | 386 | 400 | 6,064 |
| (*c*) Surveys — India | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans | .. | .. | .. | 9 | .. | .. | 21 | .. | .. | 30 |
| (*e*) Sowing and planting | .. | 40 | 147 | 348 | .. | 507 | 1,236 | 8 | 829 | 3,115 |
| (*f*) Protection from fire | .. | 3,909 | 5,057 | 15 | 4,390 | 5,588 | 1,230 | 942 | 1,249 | 22,380 |
| (*g*) Other works | .. | 11,508 | 9,271 | 9,868 | 4,237 | 5,771 | 5,433 | 8,613 | 10,942 | 65,649 |
| IX. Miscellaneous— | | | | | | | | | | |
| (*a*) Law charges | .. | .. | .. | .. | .. | .. | 28 | .. | .. | 28 |
| (*b*) Other charges | 261 | .. | 14 | 117 | 68 | 374 | — 355 | 41 | 133 | 653 |
| Total, A. Conservancy and Works | 1,286 | 30,411 | 21,793 | 17,467 | 18,550 | 37,360 | 20,447 | 16,231 | 23,324 | 1,86,875 |
| *B. Establishments.* | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (*a*) Conservators | 19,136 | .. | .. | .. | .. | .. | .. | .. | .. | 19,136 |
| (*b*) Superior officers | 10,974 | 17,993 | 4,190 | 7,067 | 3,647 | 11,337 | 17,780 | 4,041 | 11,724 | 88,753 |
| (*c*) Subordinate Forest and Depot establishments. | 1,410 | 18,030 | 15,017 | 11,966 | 12,909 | 21,729 | 19,577 | 7,758 | 14,461 | 1,22,857 |
| (*d*) Office establishments | 7,947 | 5,924 | 5,282 | 5,531 | 4,454 | 6,399 | 12,535 | 3,428 | 5,094 | 56,594 |
| (*e*) Deputation and special allowances | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*f*) Exchange compensation allowance | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | |
| (*a*) Conservators | 2,883 | .. | .. | .. | .. | .. | .. | .. | .. | 2,883 |
| (*b*) Superior officers | 317 | 2,613 | 1,620 | 1,364 | 1,264 | 2,041 | 2,212 | 1,568 | 2,333 | 15,332 |
| (*c*) Subordinate Forest and Depot establishments. | 134 | 5,216 | 4,220 | 3,970 | 4,714 | 5,752 | 5,981 | 2,414 | 3,978 | 36,379 |
| (*d*) Office establishments | 963 | 1,213 | 850 | 1,090 | 674 | 1,055 | 2,936 | 1,178 | 896 | 10,855 |
| III. Contingencies— | | | | | | | | | | |
| (*a*) Contract contingencies | 1,277 | 3,006 | 2,300 | 1,760 | 1,339 | 2,216 | 3,291 | 1,224 | 1,825 | 18,238 |
| (*b*) Non-contract contingencies | 2,480 | 766 | 306 | 145 | 276 | 233 | 117 | 359 | 80 | 4,762 |
| Grain compensation allowance | 312 | .. | 2 | 975 | 1,130 | 1,657 | 511 | 647 | 195 | 5,429 |
| Total, B. Establishments | 47,833 | 54,761 | 33,787 | 33,868 | 30,407 | 52,419 | 64,940 | 22,617 | 40,586 | 3,81,218 |
| Grand Total of Expenditure A and B | 49,119 | 85,172 | 55,586 | 51,335 | 48,957 | 89,779 | 85,387 | 38,848 | 63,910 | 5,68,093 |

Summary of expenditure of the different districts for the Forest year 1915-16—*cont.*

| No. Budget heads. | Direction. | Working-plans officer, Southern Circle. | Vellore, North. | Vellore, South. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. | Tinnevelly. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SOUTHERN CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks | 9 | .. | 273 | 4,786 | 1,276 | 328 | 783 | 278 | 830 | 1,230 | 9,793 |
| 11—FORESTS. | | | | | | | | | | | |
| *A. Conservancy and Works.* | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | |
| (*a*) Timber | .. | .. | .. | 3 | .. | 752 | 437 | .. | .. | .. | 1,192 |
| (*b*) Firewood and charcoal | .. | .. | .. | 5 | .. | 56 | .. | 379 | .. | 310 | 740 |
| (*c*) Bamboos | .. | .. | .. | .. | 15 | 108 | .. | .. | .. | 13 | 136 |
| (*d*) Sandalwood | .. | .. | .. | 6,586 | .. | 2,239 | 683 | 225 | .. | . | 9,733 |
| (*e*) Grass and other minor produce | .. | .. | 13 | .. | .. | .. | .. | .. | .. | 31 | 44 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | .. | 2,106 | 2,271 | 1,695 | 2,003 | 2,847 | 2,234 | 2,272 | 2,996 | 18,424 |
| III. Confiscated, drift and waif-wood | .. | .. | 1 | 4 | .. | 4 | 12 | 2 | 1 | .. | 24 |
| IV. Forests not managed by Government— | | | | | | | | | | | |
| (*a*) Shared and private forests | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | .. | .. | .. | .. | 106 | .. | .. | .. | .. | 106 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (*a*) Purchase of cattle | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Feed and keep of cattle | .. | .. | 7 | 4 | .. | .. | 4 | .. | .. | .. | 15 |
| (*c*) Stores, tools and plant | 304 | 239 | 254 | 1,702 | 238 | 868 | 188 | 78 | 362 | 439 | 4,672 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (*a*) Roads and bridges | .. | .. | 1,162 | 1,713 | 293 | 2,526 | 3,385 | 1,805 | 6,441 | 3,043 | 20,368 |
| (*b*) Buildings | .. | .. | 5,007 | 6,391 | 1,820 | 5,537 | 4,626 | 1,727 | 5,483 | 7,489 | 38,080 |
| (*c*) Other works | .. | .. | 993 | 145 | 18 | 1,083 | 65 | 115 | 662 | 330 | 3,411 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | |
| (*a*) Demarcation | .. | .. | 39 | 175 | 45 | 500 | 354 | 193 | 2,249 | 486 | 4,041 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | 1,218 | 2,342 | .. | .. | 12 | 1,242 | 4,146 | .. | 8,960 |
| (*c*) Surveys { Local | 523 | .. | 440 | 474 | 387 | 983 | 1,193 | 535 | 284 | 1,348 | 6,167 |
| (*c*) Surveys { India | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans | .. | 8,279 | .. | .. | 61 | .. | .. | .. | .. | .. | 8,340 |
| (*e*) Sowing and planting | .. | .. | 1,000 | 43 | 33 | 96 | 1 | — 79 | 1,682 | 550 | 3,326 |
| (*f*) Protection from fire | .. | .. | 649 | 455 | 139 | 3,437 | 1,755 | 503 | 5,181 | 5,100 | 17,219 |
| (*g*) Other works | .. | .. | 6,899 | 7,852 | 6,187 | 6,467 | 3,889 | 6,529 | 9,032 | 5,657 | 52,512 |
| IX. Miscellaneous— | | | | | | | | | | | |
| (*a*) Law charges | .. | .. | .. | .. | .. | .. | 49 | .. | . | .. | 49 |
| (*b*) Other charges | 467 | .. | 28 | 414 | 6 | 1,069 | 36 | 138 | 53 | 41 | 2,252 |
| Total, A. Conservancy and Works | 1,294 | 8,518 | 19,816 | 30,569 | 10,937 | 27,834 | 19,536 | 15,626 | 37,848 | 27,833 | 1,99,811 |
| *B. Establishment.* | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (*a*) Conservators | 22,060 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,060 |
| (*b*) Superior officers | 6,153 | 8,044 | 6,080 | 7,494 | 4,879 | 16,600 | 7,250 | 8,275 | 16,937 | 11,717 | 93,429 |
| (*c*) Subordinate Forest and Depot establishments. | 1,650 | 2,437 | 9,452 | 14,722 | 10,771 | 17,018 | 13,351 | 11,965 | 16,971 | 16,854 | 1,15,191 |
| (*d*) Office establishments | 8,765 | 2,644 | 3,554 | 5,757 | 4,985 | 5,622 | 5,814 | 6,090 | 5,552 | 5,638 | 54,421 |
| (*e*) Deputation and Special allowances | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*f*) Exchange compensation allowance | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | | |
| (*a*) Conservators | 1,507 | .. | 159 | 497 | 236 | .. | 58 | .. | . | .. | 2,457 |
| (*b*) Superior officers | 231 | 3,541 | 983 | 1,767 | 1,951 | 1,899 | 1,949 | 1,152 | 2,151 | 1,488 | 17,112 |
| (*c*) Subordinate Forest and Depot establishments. | 174 | 1,026 | 2,204 | 3,349 | 3,097 | 5,493 | 3,751 | 3,116 | 4,219 | 4,323 | 30,752 |
| (*d*) Office establishments | 1,158 | 1,022 | 382 | 668 | 947 | 840 | 755 | 651 | 1,359 | 985 | 8,767 |
| III. Contingencies— | | | | | | | | | | | |
| (*a*) Rents, rates and taxes | .. | .. | 233 | 331 | 223 | 63 | 60 | 101 | 191 | 264 | 1,466 |
| (*b*) Service postage and telegrams | 1,086 | 299 | 861 | 1,320 | 989 | 1,515 | 689 | 979 | 1,386 | 925 | 10,049 |
| (*d*) Sundries | 3,800 | 1,370 | 847 | 1,565 | 863 | 1,564 | 1,358 | 1,256 | 1,146 | 1,633 | 14,802 |
| Total, B. Establishment | 46,584 | 20,383 | 24,755 | 37,470 | 28,941 | 50,614 | 35,035 | 33,585 | 49,912 | 43,227 | 3,70,506 |
| Grand Total of Expenditure A and B | 47,878 | 28,901 | 44,571 | 68,039 | 39,878 | 78,448 | 54,571 | 49,211 | 87,760 | 71,060 | 5,70,317 |

## Summary of expenditure of the different districts for the Forest year 1915-16—*cont.*

| Budget heads. | Direction. | South Canara. | North Mangalore. | South Mangalore. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working plans office.* | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WESTERN CIRCLE. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks .. | .. | 1,621 | .. | .. | 150 | 27 | 489 | .. | 83 | 313 | .. | .. | 2,683 |
| *A. Conservancy and Works.* | | | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | | | |
| (*a*) Timber .. .. | .. | 1,001 | 18 | 25 | 16,251 | 8,777 | 3,860 | 32 | 66 | 116 | 13,861 | .. | 44,007 |
| (*b*) Firewood and charcoal. | .. | 1,368 | .. | 15 | 268 | 124 | 23,283 | 1,171 | 105 | 245 | .. | .. | 26,579 |
| (*c*) Bamboos .. .. | .. | 153 | .. | .. | 995 | 4,223 | — 49 | 349 | .. | 12 | .. | .. | 5,683 |
| (*d*) Sandalwood .. .. | .. | 9 | .. | .. | .. | .. | 232 | 3,424 | 5,213 | 5 | .. | .. | 8,883 |
| (*e*) Grass and other minor produce. | .. | 2,129 | 35 | 8 | .. | 7 | 355 | 1,811 | 805 | 29 | 758 | .. | 5,937 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | . | 5,770 | 624 | 516 | 485 | 240 | 784 | 1,638 | 2,516 | 2,502 | 2,094 | .. | 17,169 |
| III. Confiscated, drift and waif-wood. | .. | 47 | 30 | .. | 2 | 38 | .. | 2 | 4 | 1 | 17 | .. | 141 |
| IV. Revenue from forests not managed by Government. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | .. | .. | .. | 50 | 980 | 4,500 | .. | .. | .. | 2,500 | .. | 8,030 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | | | |
| (*a*) Purchase of cattle .. | .. | 709 | .. | .. | 2,343 | 1,655 | 5,615 | .. | .. | 496 | 2,711 | .. | 13,529 |
| (*b*) Feed and keep of cattle. | 505 | 2,100 | .. | 623 | 8,999 | 16,634 | 27,843 | .. | .. | .. | 14,899 | .. | 71,603 |
| (*c*) Stores, tools and plant. | 866 | 235 | .. | 7 | 617 | 2,062 | 1,283 | 502 | 828 | 370 | 3,352 | .. | 10,122 |
| VII. Communications and buildings— | | | | | | | | | | | | | |
| (*a*) Roads and bridges .. | .. | 1,705 | .. | 86 | 3,855 | 3,042 | 6,611 | 3,811 | 8,924 | 1,024 | 14,164 | .. | 43,222 |
| (*b*) Buildings .. .. | 121 | 8,475 | 386 | 723 | 8,897 | 4,339 | 3,704 | 2,789 | 7,599 | 4,399 | 3,363 | .. | 44,796 |
| (*c*) Other works .. .. | .. | 95 | 10 | 107 | 527 | 1,776 | 734 | 226 | 657 | 64 | 268 | .. | 4,464 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | | | |
| (*a*) Demarcation .. | .. | 67 | 17 | .. | 935 | 563 | 2,829 | 556 | 1,247 | 108 | 4 | .. | 6,326 |
| (*b*) Cost of Forest Settlement; compensation for land and rights. | .. | .. | .. | .. | .. | .. | .. | 3,565 | 526 | 45 | 1,576 | .. | 5,512 |
| (*c*) Surveys .. { Local .. | .. | 363 | . | .. | 556 | 411 | 2,376 | 582 | 433 | 454 | 770 | .. | 5,945 |
| { India .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans .. | .. | 103 | .. | .. | .. | 532 | .. | .. | .. | .. | .. | 1,144 | 1,779 |
| (*e*) Sowing and planting.. | 636 | .. | 34 | 49 | 1,299 | 5,877 | 1,362 | 9 | 64 | 55 | 700 | .. | 10,085 |
| (*f*) Protection from fire .. | .. | 3,432 | 244 | 518 | 7,054 | 2,675 | 3,903 | 3,131 | 3,313 | 2,455 | 2,278 | .. | 29,003 |
| (*g*) Other works .. .. | .. | 481 | 20 | 2 | 2,546 | 1,727 | 1,545 | 2,768 | 4,437 | 8,555 | 4,776 | .. | 26,857 |
| IX. Miscellaneous— | | | | | | | | | | | | | |
| (*a*) Law charges .. .. | .. | .. | .. | .. | .. | .. | 3 | 10 | .. | 1 | .. | .. | 14 |
| (*b*) Other charges .. .. | 473 | 289 | .. | 30 | 42 | 151 | 6,530 | 4 | 462 | 618 | 954 | .. | 9,553 |
| Total, A. Conservancy and Works .. | 2,601 | 28,531 | 1,418 | 2,709 | 55,721 | 55,833 | 97,303 | 26,380 | 36,999 | 21,554 | 69,045 | 1,144 | 3,99,238 |
| *B. Establishments.* | | | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 20,080 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,080 |
| (*b*) Superior officers .. .. | 8,993 | 10,390 | 310 | 460 | 8,108 | 9,898 | 19,561 | 3,610 | 16,800 | 7,223 | 24,098 | 1,910 | 1,11,361 |
| (*c*) Subordinate Forest and Depot establishments. | 610 | 14,228 | 1,413 | 1,588 | 13,279 | 7,462 | 18,015 | 9,412 | 15,977 | 8,523 | 9,493 | 271 | 1,00,341 |
| (*d*) Office establishments .. | 9,367 | 5,727 | 560 | 462 | 6,391 | 4,701 | 6,480 | 3,826 | 5,238 | 4,234 | 6,196 | 239 | 53,421 |
| (*e*) Grain compensation allowance. | 190 | 1,637 | 173 | 173 | 1,279 | 895 | 1,469 | 786 | 1,309 | 938 | 722 | 8 | 9,579 |
| II. Travelling allowances— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 2,014 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2,014 |
| (*b*) Superior officers .. .. | 638 | 1,558 | .. | 302 | 1,997 | 2,534 | 3,446 | 1,835 | 2,455 | 1,594 | 3,694 | 348 | 20,401 |
| (*c*) Subordinate Forest and Depot establishments. | 136 | 3,961 | 381 | 402 | 2,903 | 2,276 | 3,174 | 2,082 | 4,210 | 2,978 | 2,038 | 43 | 24,584 |
| (*d*) Office establishments .. | 582 | 1,077 | 93 | 107 | 533 | 849 | 547 | 627 | 839 | 818 | 1,128 | 95 | 7,295 |
| III (*a*) Contract contingencies— | | | | | | | | | | | | | |
| 1. Official postage and service stamps. | 548 | 1,344 | 217 | 148 | 567 | 649 | 858 | 376 | 760 | 403 | 1,060 | 1 | 6,931 |
| 2, 3, 4 and (*b*) 2 .. .. | 6,566 | 1,460 | 127 | 148 | 1,186 | 2,159 | 1,370 | 1,104 | 1,230 | 738 | 2,290 | 370 | 18,748 |
| (*b*) 1. Rents, rates and taxes .. | 105 | 24 | .. | .. | 13 | 57 | 1,297 | 620 | 36 | 46 | 126 | .. | 2,324 |
| Total, B. Establishments .. | 49,829 | 41,476 | 3,274 | 3,790 | 36,256 | 31,480 | 56,217 | 24,278 | 48,854 | 27,495 | 50,845 | 3,285 | 3,77,079 |
| Grand Total of Expenditure A and B | 52,430 | 70,007 | 4,692 | 6,499 | 91,977 | 87,313 | 1,53,520 | 50,658 | 85,853 | 49,049 | 1,19,890 | * 4,429 | 7,76,817 |

* For June 1916. Relates to the Southern Circle.

SUMMARY of receipts and expenditure during 1915-16 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements.

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1915-16. | 1914-15. |
| RECEIPTS. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. .. | 52,198 | 949 | 3,762 | 3,01,091 | 3,58,000 | 3,15,104 |
| (b) Firewood and charcoal .. | 18,225 | — 2,567 | 2,462 | 46,263 | 64,383 | 1,06,460 |
| (c) Bamboos .. .. .. | 4,001 | 15 | 295 | 9,154 | 13,465 | 11,971 |
| (d) Sandalwood .. .. | .. | 135 | 1,29,143 | 1,17,978 | 2,47,256 | 1,76,162 |
| (e) Grass and other minor produce. | 7,847 | 8,357 | 531 | 20,773 | 37,508 | 51,196 |
| Total, I .. | 82,271 | 6,889 | 1,36,193 | 4,95,259 | 7,20,612 | 6,60,893 |
| II. Timber and other produce removed from the forests by consumers, etc.— | | | | | | |
| (a) Timber .. .. .. | 88,934 | 88,516 | 63,598 | 39,737 | 2,80,785 | 3,52,212 |
| (b) Firewood and charcoal .. | 1,02,341 | 1,69,821 | 2,56,714 | 63,361 | 5,92,237 | 8,99,785 |
| (c) Bamboos .. .. .. | 1,38,580 | 16,250 | 1,18,876 | 35,769 | 3,09,485 | 2,47,309 |
| (d) Grazing and fodder grass.. | 1,19,005 | 3,18,777 | 1,69,467 | 79,322 | 6,86,571 | 6,96,334 |
| (e) Other produce .. .. | 1,13,707 | 3,56,123 | 1,91,186 | 58,246 | 7,19,262 | 6,00,610 |
| (f) Tree-owners' fees .. .. | 40,019 | 74,589 | 14,308 | 1,240 | 1,30,156 | 95,189 |
| (g) Other items .. .. | .. | 474 | 839 | .. | 1,313 | 891 |
| (h) Commutation fees .. .. | .. | .. | 606 | .. | 606 | 476 |
| Total, II .. | 6,02,586 | 10,24,560 | 8,15,594 | 2,77,675 | 27,20,415 | 28,92,206 |
| III. Confiscated drift and waifwood .. | 7,887 | 3,415 | 4,415 | 3,906 | 19,623 | 18,383 |
| IV. Revenue from forests not managed by Government. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | |
| (a) Fines and forfeitures .. | 36,288 | 84,060 | 70,389 | 31,261 | 2,21,998 | 2,42,126 |
| (b) Other sources .. .. .. | 15,873 | 62,052 | 14,203 | 1,63,699 | 2,55,827 | 2,04,244 |
| Total, V .. | 52,161 | 1,46,112 | 84,592 | 1,94,960 | 4,77,825 | 4,46,370 |
| Grand Total, Receipts .. | 7,44,905 | 11,80,976 | 10,40,794 | 9,71,800 | 39,38,475 | 40,17,852 |
| EXPENDITURE. | | | | | | |
| 1. Refunds and drawbacks .. .. | 2,459 | 8,604 | 9,793 | 2,683 | 23,539 | 37,322 |
| *A. Conservancy and Works.* | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. .. | 23,202 | 12 | 1,192 | 44,007 | 68,413 | 52,604 |
| (b) Firewood and charcoal .. | 8,786 | 117 | 740 | 26,579 | 36,222 | 39,226 |
| (c) Bamboos .. .. .. | 1,988 | .. | 136 | 5,683 | 7,807 | 8,822 |
| (d) Sandalwood .. .. | .. | 124 | 9,733 | 8,283 | 18,740 | 15,180 |
| (e) Grass and other minor produce. | 7,997 | 2,112 | 44 | 5,937 | 16,090 | 16,610 |
| Total, A-I .. | 41,973 | 2,365 | 11,845 | 91,089 | 1,47,272 | 1,32,442 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | 48,650 | 30,850 | 18,424 | 17,169 | 1,15,093 | 1,25,898 |
| III. Confiscated drift and waifwood .. | 1,835 | 53 | 24 | 141 | 2,053 | 3,148 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | 474 | 8,000 | 106 | 8,030 | 16,610 | 20,183 |
| VI. Live-stock, stores, tools and plant— | | | | | | |
| (a) Purchase of cattle .. | 20 | .. | .. | 13,529 | 13,549 | 13,010 |
| (b) Feed and keep of cattle .. | 10,107 | 29 | 15 | 71,603 | 81,754 | 78,628 |
| (c) Stores, tools and plant .. | 10,270 | 3,024 | 4,672 | 10,122 | 28,088 | 33,037 |
| Total, A-VI .. | 20,397 | 3,053 | 4,687 | 95,254 | 1,23,391 | 1,24,675 |
| VII. Communications and buildings— | | | | | | |
| (a) Roads and bridges .. | 31,462 | 13,181 | 20,268 | 43,222 | 1,08,238 | 1,25,219 |
| (b) Buildings .. .. .. | 26,649 | 22,461 | 38,080 | 44,795 | 1,31,985 | 1,49,769 |
| (c) Other works .. .. | 3,538 | 866 | 3,411 | 4,464 | 12,279 | 17,767 |
| Total, A-VII .. | 61,649 | 36,508 | 61,859 | 92,481 | 2,52,497 | 2,92,755 |

Summary of receipts and expenditure during 1915-16 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements—*cont.*

| Budget heads | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1915-16. | 1914-15. |
| EXPENDITURE—*cont.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| *A. Conservancy and Works*—cont. | | | | | | |
| VIII. Demarcation, etc.— | | | | | | |
| (*a*) Demarcation .. .. | 4,402 | 6,805 | 4,041 | 6,326 | 21,574 | 33,843 |
| (*b*) Cost of settlement .. | 193 | 1,322 | 8,960 | 5,512 | 15,987 | 1,89,921 |
| (*c*) Surveys. (1) Local .. | 8,260 | 6,064 | 6,167 | 5,945 | 26,436 | 29,217 |
| (2) India .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working-plans .. .. | 97 | 30 | 8,340 | 1,779 | 10,246 | 6,187 |
| (*e*) Sowing and planting .. | 24,708 | 3,115 | 3,326 | 10,085 | 41,234 | 72,846 |
| (*f*) Protection from fire .. | 57,442 | 22,380 | 17,219 | 29,003 | 1,26,044 | 1,40,101 |
| (*g*) Other works .. .. | 16,135 | 65,649 | 52,512 | 26,857 | 1,61,153 | 1,68,793 |
| Total, A-VIII .. | 1,11,237 | 1,05,365 | 1,00,565 | 85,507 | 4,02,674 | 6,40,908 |
| IX. Miscellaneous— | | | | | | |
| (*a*) Law charges .. .. | .. | 28 | 49 | 14 | 91 | 689 |
| (*b*) Other charges .. .. | 1,827 | 653 | 2,252 | 9,553 | 14,285 | 11,276 |
| Total, A-IX .. | 1,827 | 681 | 2,301 | 9,567 | 14,376 | 11,965 |
| Total, A. Conservancy and Works, including Refunds. | 2,90,501 | 1,95,479 | 2,09,604 | 4,01,921 | 10,97,505 | 13,89,296 |
| *B. Establishments.* | | | | | | |
| I. Salaries— | | | | | | |
| (*a*) Conservators .. .. | 21,797 | 19,136 | 22,060 | 20,080 | 83,073 | 88,392 |
| (*b*) Superior officers .. .. | 74,304 | 88,753 | 93,429 | 1,11,361 | 3,67,847 | 3,74,253 |
| (*c*) Subordinate forest and depôt establishments. | 1,28,681 | 1,22,857 | 1,15,191 | 1,00,341 | 4,66,970 | 4,73,801 |
| (*d*) Office establishments .. | 56,029 | 56,594 | 54,421 | 53,421 | 2,20,465 | 2,28,778 |
| (*e*) Grain compensation allowance. | .. | .. | .. | 9,579 | 9,579 | .. |
| Total, B-I .. | 2,80,711 | 2,87,340 | 2,85,101 | 2,94,782 | 11,47,934 | 11,65,224 |
| II. Travelling allowances— | | | | | | |
| (*a*) Conservators .. .. | 3,723 | 2,883 | 2,457 | 2,014 | 11,077 | 9,893 |
| (*b*) Superior officers .. .. | 15,588 | 15,332 | 17,112 | 20,401 | 68,433 | 65,354 |
| (*c*) Subordinate forest and depôt establishments. | 39,407 | 36,379 | 30,752 | 24,584 | 1,31,122 | 1,28,525 |
| (*d*) Office establishment .. | 12,627 | 10,855 | 8,767 | 7,295 | 39,544 | 40,602 |
| Total, B-II .. | 71,345 | 65,449 | 59,088 | 54,294 | 2,50,176 | 2,44,374 |
| III. Contingencies— | | | | | | |
| (*a*) Rents, rates and taxes .. | 1,310 | 18,238 | 1,466 | 6,931 | 27,945 | 6,618 |
| (*b*) Official postage and telegrams. | 9,666 | 4,762 | 10,049 | 18,748 | 43,225 | 36,474 |
| (*c*) Sundries .. .. .. | 18,609 | 5,429 | 14,802 | 2,324 | 41,164 | 94,665 |
| Total, B-III .. | 29,585 | 28,429 | 26,317 | 28,003 | 1,12,334 | 1,37,757 |
| Total, B. Establishments .. | 3,81,641 | 3,81,218 | 3,70,506 | 3,77,079 | 15,10,444 | 15,47,355 |
| Grand Total Expenditure including Refunds and Drawbacks. | 6,72,142 | 5,76,697 | 5,80,110 | 7,79,000 | 26,07,949 | 29,36,651 |
| Surplus .. .. | 72,763 | 6,04,279 | 4,60,684 | 1,92,800 | 13,30,526 | 10,81,201 |
| Total .. | 7,44,905 | 11,80,976 | 10,40,794 | 9,71,800 | 39,38,475 | 40,17,852 |

## ANNUAL FORM No. 81.

*Forest Department, Madras Presidency.*

OUTSTANDINGS and Liabilities on account of Contractors and Disbursers for the Forest year 1915-16.

| Districts. | Department debtor. | | | Department creditor. | | | Balance due. | |
|---|---|---|---|---|---|---|---|---|
| | At commencement of year. | Recoveries in cash and value of supplies and work done during the year. | At close of year. | At commencement of year. | Payments made during year. | At close of year. | To department (outstandings). | By department (liabilities). |
| *Northern Circle.* | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| Direction, Northern Circle .. | .. | 1,732 2 4 | 1,732 2 4 | 119 2 10 | 1,660 5 1 | 1,779 7 11 | 47 5 7 | .. |
| Ganjam .. .. .. | .. | (a)78,756 8 5 | (b) 78,756 8 5 | (c)2,576 0 3 | (d) 78,577 9 7 | (e) 81,153 9 10 | (f)2,397 1 5 | .. |
| Vizagapatam .. .. | .. | 28,563 2 5 | 28,563 2 5 | 984 14 3 | 28,188 15 4 | 29,173 13 7 | 610 11 2 | .. |
| Godavari, Upper .. .. | .. | 43,222 7 9 | 43,222 7 9 | 1,032 11 1 | 43,556 9 9 | 44,589 4 10 | 1,366 13 1 | .. |
| Do. Lower .. .. | .. | 73,358 3 0 | 73,358 3 0 | 1,627 13 8 | 73,128 4 5 | 74,756 2 1 | 1,397 15 1 | .. |
| Kistna .. .. .. | .. | 32,317 6 10 | 32,317 6 10 | 1,051 9 7 | 31,810 2 2 | 32,861 11 9 | 544 4 11 | .. |
| Kurnool, East .. .. | .. | 95,256 13 10 | 95,256 13 10 | 2,215 0 2 | 95,120 13 9 | 97,335 13 11 | 2,079 0 1 | .. |
| Do. South .. .. | .. | 64,216 12 10 | 64,216 12 10 | 1,497 6 1 | 64,596 1 4 | 66,093 7 5 | 1,876 10 7 | .. |
| Do. West .. .. | .. | 1,67,224 11 7 | 1,67,224 11 7 | 2,964 1 3 | 1,68,587 12 5 | 1,71,551 13 8 | 4,327 2 1 | .. |
| Total .. | .. | 5,84,648 5 0 | 5,84,648 5 0 | 14,068 11 2 | 5,85,226 9 10 | 5,99,295 5 0 | 14,647 0 0 | .. |
| *Central Circle.* | | | | | | | | |
| Direction, Central Circle .. | .. | 996 1 8 | 996 1 8 | 38 7 3 | 966 4 0 | 1,004 11 3 | 8 9 7 | .. |
| Guntur .. .. .. | .. | 40,408 2 4 | 40,408 2 4 | 299 5 3 | 40,320 10 6 | 40,619 15 9 | 211 13 5 | .. |
| Nellore .. .. .. | .. | 60,431 6 11 | 60,431 6 11 | 2,285 10 6 | 59,938 4 0 | 62,223 14 6 | 1,792 7 7 | .. |
| Cuddapah, East .. .. | .. | 88,187 7 9 | 88,187 7 9 | 2,194 15 10 | 88,278 3 6 | 90,473 3 4 | 2,285 11 7 | .. |
| Do. West .. .. | .. | 45,934 4 6 | 45,934 4 6 | 1,931 1 4 | 45,092 14 2 | 47,023 15 6 | 1,089 11 0 | .. |
| Bellary .. .. .. .. | .. | 54,649 10 2 | 54,649 10 2 | 997 7 9 | 54,089 7 9 | 55,086 15 6 | 437 5 4 | .. |
| Anantapur .. .. .. | .. | 50,740 7 7 | 50,740 7 7 | 806 11 3 | 50,872 0 5 | 51,678 11 8 | 938 4 1 | .. |
| Chittoor .. .. .. | .. | 52,277 10 10 | 52,277 10 10 | 1,061 3 0 | 51,464 8 10 | 52,525 11 10 | 248 1 0 | .. |
| Chingleput .. .. .. | .. | 33,122 13 2 | 33,122 13 2 | 1,213 2 2 | 32,240 15 6 | 33,454 1 8 | 331 4 6 | .. |
| Total .. | .. | 4,26,748 0 11 | 4,26,748 0 11 | 10,828 0 4 | 4,23,263 4 8 | 4,34,091 5 0 | 7,343 4 1 | .. |
| *Southern Circle.* | | | | | | | | |
| Direction, Southern Circle .. | .. | 1,676 7 1 | 1,676 7 1 | 21 3 4 | 1,705 6 9 | 1,726 10 1 | 50 3 0 | .. |
| Vellore, North .. .. | .. | 36,312 3 1 | 36,312 3 1 | 1,178 4 8 | 36,243 1 7 | 37,421 6 3 | 1,109 3 2 | .. |
| Do. South .. .. | .. | 56,010 5 0 | 56,010 5 0 | 1,153 12 11 | 56,391 15 11 | 57,545 12 10 | 1,535 7 10 | .. |
| Arcot, South—Tanjore .. | .. | 30,637 8 5 | 30,637 8 5 | 280 10 7 | 30,878 10 5 | 31,159 5 0 | 521 12 7 | .. |
| Salem, North .. .. .. | .. | 57,128 15 1 | 57,128 15 1 | 1,252 7 2 | 56,654 4 0 | 57,906 11 2 | 777 12 1 | .. |
| Do. South .. .. .. | .. | 46,859 9 10 | 46,859 9 10 | 3,064 7 6 | 45,325 3 3 | 48,389 10 9 | 1,530 0 11 | .. |
| Trichinopoly .. .. .. | .. | 38,807 3 0 | 38,807 3 0 | 276 9 7 | 38,907 11 7 | 39,184 5 2 | 377 2 2 | .. |
| Madura .. .. .. | .. | 89,766 9 2 | 89,766 9 2 | 3,343 9 2 | 88,802 7 11 | 92,146 1 1 | 2,379 7 11 | .. |
| Tinnevelly — Ramnad .. | .. | 63,384 13 5 | 63,384 13 5 | 876 3 7 | 63,776 0 11 | 64,652 4 6 | 1,267 7 1 | .. |
| Working Plans office, Southern Circle. | .. | 26,056 13 6 | 26,056 13 6 | 370 7 3 | 25,842 8 0 | 26,212 10 3 | 155 12 9 | .. |
| Total .. | .. | 4,46,640 7 7 | 4,46,640 7 7 | 11,817 11 9 | 4,44,527 1 4 | 4,56,344 13 1 | 9,704 5 6 | |
| *Western Circle.* | | | | | | | | |
| Direction, Western Circle .. | .. | 934 1 2 | 934 1 2 | 57 7 6 | 957 2 5 | 1,014 9 11 | 80 8 9 | .. |
| North Mangalore .. .. | .. | 4,825 8 5 | 4,825 8 5 | .. | 5,929 6 6 | 5,929 6 6 | 1,103 14 1 | .. |
| South do. .. .. | .. | 72,912 4 5 | 72,912 4 5 | 1,597 1 7 | 73,143 5 7 | 74,740 7 2 | 1,828 2 9 | .. |
| North Malabar .. .. | .. | 91,967 5 2 | 91,967 5 2 | 3,966 3 11 | 89,968 15 8 | 93,935 3 7 | 1,967 14 5 | .. |
| South do. .. .. | .. | 69,292 6 1 | 69,292 6 1 | 2,008 0 6 | 71,076 12 10 | 73,084 13 4 | 3,792 7 3 | .. |
| The Nilgiris .. .. .. | .. | 1,09,743 4 2 | 1,09,743 4 2 | 3,585 0 9 | 1,09,475 2 10 | 1,13,060 3 7 | 3,316 15 5 | .. |
| Kollegal .. .. .. | .. | 51,435 13 7 | 51,435 13 7 | 818 3 0 | 51,732 4 10 | 52,550 7 10 | 1,114 10 3 | .. |
| North Coimbatore .. .. | .. | 71,781 14 8 | 71,781 14 8 | 2,551 0 1 | 71,703 11 0 | 74,254 11 1 | 2,472 12 5 | .. |
| Central do. .. .. | .. | 38,416 3 10 | 38,416 3 10 | 1,644 12 4 | 38,164 7 5 | 39,809 3 9 | 1,392 15 11 | .. |
| South do. .. .. | .. | 84,035 2 2 | 84,035 2 2 | 2,851 1 4 | 86,199 8 10 | 89,050 10 2 | 5,015 8 0 | .. |
| Total .. | .. | 5,95,343 15 8 | 5,95,343 15 8 | 19,078 15 0 | 5,98,350 13 11 | 6,17,429 12 11 | 22,085 13 3 | .. |
| Grand Total, Presidency .. | .. | 20,53,380 13 2 | 20,53,380 13 2 | 55,793 6 3 | 20,51,367 13 9 | 21,07,161 4 0 | 53,760 6 10 | .. |

(a) Excludes Rs. 20,868-13-3 belonging to Parlakimedi Maliahs.
(b) Do. do. do.
(c) Excludes Rs. 730-5-9 do.
(d) Do. 20,797-11-7 do.
(e) Do. 21,528-1-4 do.
(f) Do. 659-4-1 do.

ACCOUNTANT-GENERAL'S OFFICE,
MADRAS, 31*st August* 1916.

R. SRINIVASA AYYAR,
*Deputy Accountant-General.*

## ANNUAL FORM No. 82.

*Forest Department, Madras Presidency.*

REVENUE received and outstandings on account of revenue during 1915–16.

| Districts. | Particulars. | Outstandings at commencement of year. | Value of sales and other revenue during year. | Total. | Amount realized during year. | Balance due to the department at end of year. |
|---|---|---|---|---|---|---|
| *Northern Circle.* | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| Direction .. .. .. | Timber and other forest produce. | .. | 476 5 0 | 476 5 0 | 476 5 0 | .. |
| Ganjam .. .. .. | Do. | (*j*) 7,812 1 0 | (*k*) 61,625 14 1 | (*l*) 69,437 15 1 | (*l*) 66,310 8 1 | (*a*) 3,127 7 0 |
| Visagapatam .. .. | Do. | 4,684 6 0 | 44,932 10 6 | 49,617 0 6 | 42,384 4 6 | (*b*) 7,232 12 0 |
| Godavari, Upper .. .. | Do. | (*i*) 264 12 0 | 47,560 7 1 | 47,825 3 1 | 47,229 3 11 | (*c*) 595 15 2 |
| Do. Lower .. .. | Do. | 29,295 0 11 | 2,56,353 8 6 | 2,85,648 9 5 | 2,25,964 5 5 | (*d*) 59,684 4 0 |
| Kistna .. .. .. | Do. | 18,631 5 9 | 79,248 10 11 | 97,883 0 8 | 77,479 8 2 | (*e*) 20,403 8 6 |
| Kurnool, East .. .. | Do. | 65 4 1 | 70,378 3 3 | 70,443 7 4 | 69,143 7 4 | (*f*) 1,300 0 0 |
| Do. South .. .. | Do. | 11,275 7 11 | 66,922 14 5 | 78,198 6 4 | 76,263 8 4 | (*g*) 1,934 14 0 |
| Do. West .. .. | Do. | 5,815 0 0 | 1,46,567 4 0 | 1,52,382 4 0 | 1,39,653 13 0 | (*h*) 12,728 7 0 |
| | Total .. | (*i*) 77,846 5 8 | 7,74 065 13 9 | 8,51,912 3 5 | 7,44,904 15 9 | 1,07,007 3 8 |
| *Central Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 193 0 0 | 193 0 0 | 193 0 0 | .. |
| Bellary .. .. .. | Do. | 11,424 13 11 | 2,25,920 0 6 | 2,37,344 14 5 | 1,81,399 0 0<br>(*m*) + 34 10 7 | 55,911 3 10 |
| Anantapur .. .. .. | Do. | 1,38,330 4 9 | 98,642 10 7 | 2,36,972 15 4 | 2,10,865 0 0 | 26,107 15 4 |
| Guntur .. .. .. | Do. | 8,643 10 0 | 2,23,206 10 8 | 2,31,850 4 8 | 2,17,832 0 0 | 14,018 4 8 |
| Cuddapah, West .. .. | Do. | 4,797 13 6 | 68,056 12 4 | 72,854 9 10 | 69,247 0 0 | 3,607 9 10 |
| Do. East .. .. | Do. | 16,134 15 10 | 84,480 14 11 | 1,00,615 14 9 | 78,742 0 0<br>(*n*) + 600 0 0 | 21,273 14 9 |
| Nellore .. .. .. | Do. | 28,555 6 4 | 2,78,882 12 2 | 3,07,438 2 6 | 2,51,843 0 0 | 55,595 2 6 |
| Chingleput .. .. .. | Do. | 7,639 11 10<br>(*o*) — 143 0 0 | 57,113 4 2 | 64,610 0 0 | 56,706 0 0 | 7,904 0 0 |
| Chittoor .. .. .. | Do. | 51,990 7 4 | 79,407 11 4 | 1,31,398 2 8 | 1,14,149 0 0 | 17,249 2 8 |
| | Total .. | 2,67,517 3 6<br>— 143 0 0 | 11,15,903 12 8 | 13,83,278 0 2 | 11,80,976 0 0<br>+ 634 10 7 | 2,01,667 5 7 |
| *Southern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 60,543 0 0 | 60,543 0 0 | 60,543 0 0 | .. |
| Vellore, North .. | Do. | 38,165 6 4 | 1,02,536 4 0 | 1,40,701 10 4 | 1,16,380 0 0 | 24,321 10 4 |
| Do. South .. .. | Do. | 82,054 12 5 | 1,77,555 3 11 | 2,59,610 0 4 | 1,80,230 0 0 | 79,380 0 4 |
| Arcot, South cum Tanjore .. | Do. | 15,400 14 9<br>* + 819 1 8 | 1,10,680 15 8 | 1,26,401 0 1 | 1,10,305 0 0 | 16,096 1 |
| Salem, North .. .. | Do. | 52,789 13 6 | 77,704 6 1 | 1,30,494 3 7 | 1,12,790 0 0<br>(*p*) + 773 0 0 | 16,931 3 7 |
| Do. South .. .. | Do. | 31,462 11 7<br>9,695 14 2 | 1,79,720 5 4 | 2,14,183 0 11 | 1,24,982 0 0 | 89,201 0 11 |
| Trichinopoly .. .. .. | Do | * — 319 1 8<br>(*q*) — 1,545 0 0 | 1,12,428 13 11 | 1,20,260 10 5 | 1,04,193 0 0 | 16,067 10 5 |
| Madura .. .. .. | Do. | 27,430 9 8 | 1,08,306 15 4 | 1,35,737 9 0 | 1,06,447 0 0 | 29,290 9 0 |
| Tinnevelly cum Ramnad .. | Do. | 12,799 9 9 | 1,25,456 1 11 | 1,37,955 11 8 | 1,24,924 0 0 | 13,031 11 8 |
| | Total | 2,72,799 12 2<br>— 1,545 0 0 | 10,54,632 2 2 | 13,25,886 14 4 | 10,40,794 0 0<br>(*p*) + 773 0 0 | 2,84,319 14 4 |
| *Western Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 111 0 0 | 111 0 0 | 111 0 0 | .. |
| Mangalore, North .. .. | Do. | 8,765 10 7 | 1,20,619 2 5 | 1,29,384 13 0 | 1,21,661 0 0 | 5,445 13 1 |
| Do. South .. .. | Do. | | | | ‡ 3 0 0 | 2,274 15 11 |
| Malabar, North .. .. | Do. | 11,611 1 4 | 1,16,705 9 8 | 1,28,316 11 0 | 1,16,660 0 0<br>‡ 872 11 0 | 10,784 0 0 |
| Do. South .. .. | Do. | 1,919 2 4 | 1,60,931 9 3 | 1,62,850 11 7 | 1,60,588 0 0<br>‡ 307 11 3 | 1,955 0 4 |
| The Nilgiris .. .. .. | Do. | 13,957 1 1 | 1,05,708 15 1 | 1,19,666 0 2 | 1,14,757 0 0 | 4,909 0 2 |
| Kollegal .. .. .. | Do. | 1,241 8 0 | 92,144 12 0 | 93,386 4 0 | 89,979 0 0<br>‡ 9 0 0 | 3,398 4 0 |
| Coimbatore, North .. .. | Do. | 12,590 2 1 | 1,36,440 9 3 | 1,49,030 11 4 | 1,40,421 0 0 | 8,609 11 4 |
| Do. Central .. .. | Do. | 21,181 4 8<br>†— 225 0 0 | 49,621 3 2 | 70,577 7 10 | 60,084 0 0 | 10,493 7 10 |
| Do. South .. .. | Do. | 2,397 5 4 | 2,20,906 4 8 | 2,23,303 10 0 | 1,67,539 0 0 | 55,764 10 0 |
| | Total .. | 73,663 3 5<br>†— 225 0 0 | 10,03,189 1 6 | 10,76,627 4 11 | 9,71,800 0 0<br>‡ 1,192 6 3 | 1,03,634 14 8 |
| Grand Total, Presidency... | | 6,91,826 8 9<br>†—1,913 0 0 | 39,47,790 14 1 | 45,37,704 6 10 | 39,41,075 0 7 | 6,96,629 6 3 |

(*a*) Includes Rs. 2,600 due in 1916-17 and Rs. 318-8-0 covered by Earnest money deposit.
(*b*) Includes Rs. 7,187-8-0 due in 1916-17 and Rs. 14 covered by Do.
(*c*) Includes Rs. 66-10-8 due in 1916-17, Rs. 229-4-0 covered by Earnest money deposit and Rs. 300-0-6 awaiting adjustment by Public Works Department.
(*d*) Includes Rs. 1,925 due in 1916-17, 1917-18 and 1918-19 and Rs. 44,828-12-0 due in 1916-17 and Rs. 10,572-8-0 covered by Earnest money deposit
(*e*) Includes Rs. 20,208-12-0 due in 1916-17. (*f*) Includes Rs. 900 due in 1916-17.
(*g*) Includes Rs. 1,171-4-0 due in 1916-17 and Rs. 54-14-0 covered by Earnest money deposit.
(*h*) Includes Rs. 5,255 due in 1916-17 and Rs. 1,310 covered by Do.
(*i*) The difference is due to the short collection on 350 maddi vasams sold in February 1915 not having been included in the balance due to the Department at the end of the year 1914-15.
(*j*) Excludes Rs. 100 belonging to Parlakimedi Maliahs.
(*k*) Do. 10,680 do.
(*l*) Do. 10,780 do.
(*m*) Written off in Conservator's sanction order No. 36 of 1915, dated 1st July 1915.
(*n*) Written off in Board's Proceedings Forest No. 1056, Rout., dated 13th December 1915.
(*o*) Deducted on account of erroneous demand.
(*p*) Written off. (*q*) Demand transferred to the Public Works Department on account of the transfer of padugais.
* Relates to Tanjore range transferred from Trichinopoly to South Arcot.
† Deduction due to erroneous demand and collection in the previous year.
‡ Written off the accounts.
NOTE.—Out of the total outstandings of Rs. 1,03,634-14-8 the amount actually due on or before 30th June 1916 was Rs. 62,612.

## ANNUAL FORM No. 83.

*Forest Department, Madras Presidency.*

FINANCIAL results of the year 1915–16.

| District. | Timber and other produce removed from the forests by Government agency. | | Other revenue. | | Formation, protection and improvement of forests. | Total. | |
|---|---|---|---|---|---|---|---|
| | Receipts. | Charges. | Receipts. | Charges. | Charges. | Receipts. | Charges. |
| *Northern Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Ganjam .. .. | (*b*) 10,685 | (*c*) 16,260 | (*d*) 55,673 | (*e*) 48,231 | (*f*) 31,349 | (*g*) 66,358 | (*h*) 95,840 |
| Vizagapatam .. .. | 5,019 | 5,931 | 37,397 | 25,785 | 5,874 | 42,416 | 37,590 |
| Godavari, Upper .. | 15,722 | 15,454 | 31,550 | 27,328 | 27,623 | 47,272 | 70,405 |
| Do. Lower .. | 1,682 | 6,833 | 2,24,992 | 66,171 | 21,482 | 2,26,074 | 94,486 |
| Kistna .. .. .. | 387 | 2,624 | 77,132 | 29,231 | 17,060 | 77,519 | 48,915 |
| Kurnool, East .. | 11,103 | 9,718 | 58,095 | 31,983 | 50,268 | 69,198 | 91,969 |
| Do. South .. | 3,634 | 1,214 | 72,666 | 45,197 | 37,498 | 76,300 | 83,909 |
| Do. West .. | 34,639 | 35,816 | 1,05,129 | 47,777 | 62,976 | 1,39,768 | 1,46,569 |
| Total .. | 82,271 | 93,850 | 6,62,634 | 3,21,703 | 2,54,130 | 7,44,905 | 6,69,683<br>(*a*) 2,459 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | 269 | 229 | 1,81,323 | 58,658 | 33,653 | 1,81,592 | 92,540 |
| Anantapur .. .. | 14 | .. | 2,10,851 | 34,273 | 28,681 | 2,10,865 | 62,954 |
| Guntur .. .. | 168 | 12 | 2,17,664 | 34,549 | 21 685 | 2,17,832 | 56,246 |
| Cuddapah, West .. | 122 | .. | 69,125 | 33,326 | 20,542 | 69,247 | 53,868 |
| Do. East .. | 842 | 47 | 77,900 | 61,068 | 36,033 | 78,742 | 97,148 |
| Nellore .. .. .. | 5,366 | 2,070 | 2,46,477 | 61,363 | 30.549 | 2,51,843 | 93,982 |
| Chingleput .. .. | 56 | .. | 56,650 | 23,416 | 17,889 | 56,706 | 41,305 |
| Chittoor .. .. | 52 | 7 | 1,14,097 | 40,736 | 29,307 | 1,14,149 | 70,050 |
| Total .. | 6,889 | 2,365 | 11,74,087 | 3,47,389 | 2,18,339 | 11,80,976 | 5,68,093<br>(*a*) 8,604 |
| *Southern Circle.* | | | | | | | |
| Vellore, North .. | 641 | 145 | 1,16,333 | 26,806 | 21,240 | 1,16,974 | 48,191 |
| Do. South .. | 82,342 | 9,794 | 1,11,163 | 37,479 | 26,473 | 1,93,505 | 73,746 |
| Arcot, South .. .. | 333 | 130 | 1,09,972 | 52,333 | 11,631 | 1,10,305 | 44,094 |
| Salem, North .. .. | 33,437 | 6,190 | 1,69,981 | 59,666 | 36,102 | 1,43,418 | 1,01,958 |
| Do. South .. .. | 12,575 | 1,575 | 1,24,094 | 38,290 | 19,868 | 1,36,669 | 59,733 |
| Trichinopoly .. .. | 5,761 | 1,043 | 1,02,713 | 36,396 | 16,812 | 1,08,474 | 54,251 |
| Madura .. .. | 139 | 16 | 1,06,386 | 54,105 | 56,792 | 1,06,525 | 1,10,913 |
| Tinnevelly .. .. | 965 | 696 | 1,23,959 | 44,378 | 32,357 | 1,24,924 | 77,431 |
| Total .. | 1,36,193 | 19,589 | 9,04,601 | 3,29,453 | 2,21,275 | 10,40,794 | ‡ 5,70,317<br>(*a*) 9,793 |
| *Western Circle.* | | | | | | | |
| Mangalore, North .. | 20 860 | 13,321 | 1,00,815 | 51,614 | 24,373 | 1,21,675 | 89,308 |
| Do. South .. | | | | | | | |
| Malabar, North .. | 95,741 | 39,970 | 20,933 | 17,629 | 41,018 | 1,16,674 | 98,617 |
| Do. South .. | 1,44,031 | 51,526 | 16,571 | 10,143 | 32,162 | 1,60,602 | 93,831 |
| The Nilgiris .. .. | 55,729 | 99,362 | 59,042 | 28,497 | 32 641 | 1,14,771 | 1,60,500 |
| Kollegal .. .. | 59,832 | 11,010 | 30,661 | 18,493 | 27,145 | 89,993 | 57,148 |
| Coimbatore, North .. | 62,331 | 11,010 | 78,104 | 41,035 | 40,352 | 1,40,435 | 92,427 |
| Do. Central .. | 1,247 | 1,308 | 58,850 | 29,725 | 24,819 | 60,097 | 55,852 |
| Do. South .. | 54,988 | 35,964 | 1,12,565 | 53,384 | 37,540 | 1,67,553 | 1,26,888 |
| Total .. | 4,94,259 | 2,64,001 | 4,77,541 | 2,50,520 | 2,60,050 | 9,71,800 | † 7,74,571<br>‡ 4,429 |
| Grand Total, Presidency. | 7,19,612 | 3,79,805 | 32,18,863 | 12,49,065 | 9,53,794* | 39,38,475 | 26,07,949 |

* Refunds.
† Includes refunds.
‡ Expenditure incurred by the Working Plans officer in June 1916 and relating to the Southern Circle.

(*a*) Refunds and drawbacks.
(*b*) Excludes Rs. 644-9-11 belonging to Parlakimedi Maliahs.
(*c*) Do. 652-10-2 do.
(*d*) Do. 15,617-2-4 do.
(*e*) Do. 213-15-11 do.
(*f*) Do. 32,315-7-4 do.
(*g*) Do. 16,261-12-3 do.
(*h*) Do. 33,262-1-5 do.

## ANNUAL FORM No. 84.

*Forest Department, Madras Presidency.*

STATEMENT of elephants and other live-stock during 1915-16.

| District. | On hand at the commencement of the year. | | Number received during the year. | Number disposed of during the year. | On hand at the end of the year. | | Total expenditure on maintenance during the year. |
|---|---|---|---|---|---|---|---|
| | Number. | Value. | | | Number. | Value. | |
| **(1) ELEPHANTS.** | | | | | | | |
| *Northern Circle.* | | RS. | | | | RS. | RS. A. P. |
| Ganjam .. .. | (*b*) 3 | (*c*) 5,450 | 1 | 1 | (*b*) 3 | (*c*) 4,950 | (*d*) 3,417 15 4 |
| Vizagapatam .. .. | 1 | 1,500 | .. | .. | 1 | 1,500 | 1,126 4 2 |
| Godavari, Upper .. .. | 2 | 3,700 | .. | .. | 2 | 3,700 | 1,731 13 5 |
| Kurnool, West .. .. | 2 | 3,100 | .. | .. | 2 | 3,100 | 1,528 15 4 |
| Total .. | 8 | 13,750 | 1 | 1 | 8 | 13,250 | 7,805 0 3 |
| *Central Circle*—Nil. | | | | | | | |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, South .. .. | 8 | 17,150 | .. | 3 | 5 | 13,650 | 3,142 13 10 |
| Malabar, North .. .. | 19 | 46,400 | 7 | 5 | 21 | 63,300 | 9,072 7 5 |
| Do. South .. .. | 23 | 76,100 | 6 | 6 | 23 | 81,100 | 12,781 8 2 |
| The Nilgiris .. .. | 54 | 1,37,900 | 10 | 22 | 42 | 1,31,700 | 20,465 9 8 |
| Coimbatore, South .. | 15 | 44,100 | 3 | 4 | 14 | 47,800 | 8,950 10 1 |
| Total .. | 119 | 3,21,650 | 26 | 40 | 105 | 3,37,550 | 54,413 1 2 |
| Grand Total (Elephants), Presidency. | 127 | 3,35,400 | 27 | 41 | 113 | 3,50,800 | 62,218 1 5 |
| **(2) OTHER LIVE-STOCK.** | | | | | | | |
| *Northern Circle.* | | | | | | | |
| Kurnool, East .. .. | .. | .. | 1 | .. | 1 | 20 | .. |
| Do. South .. .. | 10 | (*a*) 275 | .. | 4 | 6 | 198 | 443 12 3 |
| Do West .. .. | 20 | 1,000 | .. | .. | 20 | 1,000 | 1,903 9 5 |
| Total .. | 30 | (*a*) 1,275 | 1 | 4 | 27 | 1,218 | 2,347 5 8 |
| *Central Circle.* | | | | | | | |
| Chittoor .. .. .. | 4 | 113 | .. | 1* | 3 | 65 | .. |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, North .. .. | 20 | 1,000 | .. | 20 | .. | .. | 530 12 6 |
| Malabar, North .. .. | 2 | 200 | .. | .. | 2 | 80 | 357 9 7 |
| Do. South .. .. | 26 | 1,026 | 10 | 3 | 33 | 1,556 | 2,645 9 2 |
| The Nilgiris .. .. | 11 | 460 | 6 | 6 | 11 | 735 | 1,880 15 7 |
| Coimbatore, South .. .. | 43 | 3,421 | 32 | 9 | 66 | 4,729 | 5,801 12 2 |
| Total .. | 102 | 6,107 | 48 | 38 | 112 | 7,100 | 11,216 11 0 |
| Grand Total (Other Live-stock), Presidency. | 136 | 7,495 | 49 | 43 | 142 | 8,383 | 13,564 0 8 |

* Died.

(*a*) Last year's figure is incorrect.
(*b*) Excludes two elephants belonging to Parlakimedi Maliahs.
(*c*) Do. Rs. 4,500 being the value of the two elephants belonging to Parlakimedi Maliahs.
(*d*) Do. Rs. 2,168-0-10 being the maintenance charges of two elephants in Parlakimedi Maliahs.

## STATEMENT of elephants and other live-stock during 1915-16.

### PART II.

| District. | Name. | When purchased or otherwise obtained by Government. | Age. | How disposed of. |
|---|---|---|---|---|
| | | ELEPHANTS GONE OFF THE LIST DURING THE YEAR. | | |
| | | *Northern Circle.* | | |
| Ganjam .. | Ketaki .. .. | Purchased in June 1913 .. .. .. | YRS. 17 | Transferred to South Coimbatore district. |
| | | *Central Circle*—Nil. | | |
| | | *Southern Circle*—Nil. | | |
| | | *Western Circle.* | | |
| Mangalore, South. | 1. Daisy .. .. | Captured on 1st June 1915 .. .. .. | 20 | Died. |
| | 2. Rosy .. .. | Do. do. .. .. .. | 12 | Do. |
| | 3. Hanuman .. | Do. 21st February 1905 .. .. | 26 | Transferred to the Nilgiris. |
| Malabar, North. | 1. Leelavati .. | Do. 24th April 1915 .. .. | 20 | Died. |
| | 2. Navamony .. | Do. do. .. .. .. | 3 | Transferred to the Nilgiris. |
| | 3. Dolly .. .. | Do. do. .. .. .. | 2 | |
| | 4. Little Willy .. | Do. 25th May 1915 .. .. | 4 | |
| | 5. Sundari .. | Do. do. .. .. .. | 4 | |
| Malabar, South. | 1. Jupiter .. .. | Do. in January 1887 .. .. | 36 | Do. |
| | 2. Kalanag .. | Do. 26th ,, 1911 .. .. | 9 | Sold. |
| | 3. Supi .. .. | Do. 8th March 1915 .. .. | 1 | |
| | 4. Lawrence .. | Do. 7th ,, 1913 .. .. | 8 | |
| | 5. Bijar .. .. | Do. 5th April 1916 .. .. | 1 | Died. |
| | 6. Ketaki .. | Transferred from Ganjam .. .. .. | 17 | Sold. |
| The Nilgiris. | 1. Dostijehan .. | Born in February 1902 .. .. .. | 14 | Transferred to North Malabar. |
| | 2. Countess .. | Captured on 6th June 1910 .. .. | 25 | |
| | 3. Indrani .. | Do. 14th May 1912 .. .. | 28 | |
| | 4. Kumaran .. | Do. 11th April 1914 .. .. | 7 | |
| | 5. Nala .. .. | Do. 30th ,, ,, .. .. | 3 | |
| | 6. Narada .. .. | Do. 12th May ,, .. .. | 5 | |
| | 7. Setu .. .. | Do. 6th April ,, .. .. | 6 | |
| | 8. Gomati .. | Do. 7th ,, ,, .. .. | 26 | |
| | 9. Balaji .. .. | Do. 7th ,, ,, .. .. .. | 5 | |
| | 10. Pankajam .. | Do. 15th April 1914 .. .. | 3 | Sold. |
| | 11. Sawmy .. .. | Do. 7th June 1914 .. .. | 4 | |
| | 12. Pretty Polly .. | Do. do. .. .. .. | 5 | |
| | 13. Hyder .. .. | Do. 6th March 1915 .. .. | 2 | |
| | 14. Amaravati .. | Do. 13th ,, ,, .. .. | 2 | |
| | 15. Desaraj .. .. | Do. 11th April 1914 .. .. | 4 | |
| | 16. Penniar .. .. | Do. 5th ,, 1915 .. .. | 7 | |
| | 17. Saraswati .. | Do. 6th February 1915 .. .. | 30 | Died. |
| | 18. Tambraparni .. | Do. 31st March 1915 .. .. | 40 | Shot. |
| | 19. Gowri .. .. | Do. 5th April ,, .. .. | 10 | Lost. |
| | 20. Female calf .. | Born on 17th August 1915 .. .. .. | ... | Died. |
| | 21. Male calf .. | Do. 12th August 1915 .. .. .. | .. | Do. |
| | 22. Mohideenkhan .. | Captured on 3rd January 1896 .. .. | 37 | Transferred to South Malabar. |
| Coimbatore, South. | 1. Hilda .. .. | Captured in April 1907 .. .. .. | 28 | Transferred to Ganjam. |
| | 2. Helen .. .. | Do. 12th April 1906 .. . | 29 | Sold. |
| | 3. Savitri .. | Do. 20th December 1915 .. .. | 35 | Died. |
| | 4. Kanishka .. | Do. 3rd September 1914 .. .. | 13 | Do. |

## ANNUAL FORM No. 85.

*Forest Department, Madras Presidency.*

ABSTRACT showing the value of stores, tools and plant for 1915-16.

| District. | Buildings. | | | | Stores. | | | | Totals. | | | | Difference in value | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | | |
| | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | In favour of the year. | Against the year. |
| *Northern Circle.* | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | Rs. | Rs. |
| Direction .. | 1 | 1,600 | 1 | 1,600 | 418 | 2,879 | 406 | 2,413 | 419 | 4,479 | 407 | 4,013 | .. | 466 |
| Ganjam .. | 149 | 56,214 | 145 | 55,744 | (a)2,547 | (b) 7,918 | (c) 2,584 | (d) 7,004 | (a) 2,696 | (b)64,132 | (c)2,729 | (d)62,748 | .. | (e)1,384 |
| Vizagapatam .. | * 92 | 10,952 | 97 | 10,793* | 1,430 | 2,753 | 1,467 | 2,871 | 1,522 | 13,705 | 1,564 | 13,664 | .. | 41 |
| Godavari, Upper. | 120 | *29,329 | 126 | 30,214 | 2,401 | 16,880 | 3,071 | 17,007 | 2,521 | 46,209 | 3,197 | 47,221 | 1,012 | .. |
| Godavari, Lower. | 120 | 48,597 | 143 | 49,684 | 1,916 | 5,681 | 1,947 | 5,150 | 2,036 | 54,278 | 2,090 | 54,834 | 556 | .. |
| Kistna .. | 51 | 5,825 | 46 | 5,660 | 1,533 | 7,669 | 1,354 | 9,348 | 1,584 | 13,494 | 1,400 | 15,008 | 1,514 | .. |
| Kurnool, East. | 34 | 42,613 | 41 | 46,140 | 3,009 | 6,581 | 3,316 | 6,114 | 3,043 | 49,194 | 3,357 | 52,254 | 3,060 | .. |
| Do. South. | 82 | 47,701 | 62 | 44,677 | 3,819 | 10,221 | 3,325 | 8,274 | 3,901 | 57,922 | 3,387 | 52,951 | .. | 4,971 |
| Do. West. | 110 | 85,448 | 106 | 82,560 | 5,460 | 13,137 | 5,231 | 12,149 | 5,570 | 98,585 | 5,337 | 94,699 | .. | 3,886 |
| Total .. | *759 | *3,28,279 | 767 | 3,27,062 | * 22,533 | 73,719 | 22,701 | 70,380 | 23,292 | 4,01,998 | 23,468 | 3,97,392 | .. | 4,606 |
| *Central Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 243 | 2,787 | 257 | 2,692 | 243 | 2,787 | 257 | 2,692 | .. | 95 |
| Bellary .. | 56 | 71,422 | 55 | 70,027 | * 2,280 | 8,580 | 2,264 | 7,957 | 2,336 | 80,002 | 2,319 | 77,984 | .. | 2,018 |
| Anantapur .. | 38 | 52,687 | 36 | 53,683 | 2,000 | 6,300 | 2,668 | 7,330 | 2,038 | 58,987 | 2,704 | 61,013 | 2,026 | .. |
| Guntur .. | 32 | 18,369 | 31 | 11,773 | 2,133 | 10,321 | 2,013 | 9,147 | 2,165 | 28,690 | 2,044 | 20,920 | .. | 7,770 |
| Cuddapah, West. | 37 | 15,407 | 38 | 10,230 | 2,219 | 7,087 | 1,755 | 5,008 | 2,256 | 22,494 | 1,793 | 15,238 | .. | 7,256 |
| Cuddapah, East. | 89 | 25,248 | 89 | 28,772 | 1,288 | 5,576 | 1,377 | 6,346 | 1,377 | 30,824 | 1,466 | 35,118 | 4,294 | .. |
| Nellore .. | 43 | 33,160 | 49 | 34,276 | 44,795 | 38,817 | 46,057 | 35,266 | 44,838 | 71,977 | 46,106 | 69,542 | .. | 2,435 |
| Chingleput .. | 33 | 10,934 | 29 | 11,810 | 2,474 | 12,040 | 1,720 | 4,302 | 2,507 | 22,974 | 1,749 | 15,612 | .. | 7,362 |
| Chittoor .. | 52 | 18,198 | 47 | 23,247 | 2,572 | 5,944 | 2,723 | 5,151 | 2,624 | 24,142 | 2,780 | 28,398 | 4,256 | .. |
| Total .. | 380 | 2,45,425 | 374 | 2,43,318 | 60,004 | 97,452 | 60,844 | 83,199 | 60,384 | 3,42,877 | 61,218 | 3,26,617 | .. | 16,360 |
| *Southern Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 178 | 2,715 | 177 | 2,549 | 178 | 2,715 | 177 | 2,549 | .. | 166 |
| North Vellore. | *46 | *20,898 | 49 | 22,853 | * 1,835 | * 5,933 | 1,785 | 5,036 | 1,881 | 26,831 | 1,834 | 27,889 | 1,058 | .. |
| South do. | 47 | *25,183 | 48 | 29,692 | * 3,396 | * 9,311 | 3,107 | 9,218 | 3,443 | 34,494 | 3,155 | 38,910 | 4,416 | .. |
| South Arcot .. | 39 | 21,132 | 43 | 24,685 | 1,431 | 3,143 | 1,723 | 3,618 | 1,470 | 24,275 | 1,766 | 28,303 | 4,028 | .. |
| North Salem .. | 88 | 43,286 | 115 | 97,786 | 2,897 | 6,400 | 2,382 | 8,028 | 2,485 | 49,686 | 2,497 | 1,05,814 | 56,128 | .. |
| South do. .. | 56 | 32,273 | 61 | 44,279 | 2,618 | 6,870 | 3,009 | 7,356 | 2,674 | 39,143 | 3,070 | 51,635 | 12,492 | .. |
| Trichinopoly .. | 30 | 20,782 | 25 | 15,342 | 3,054 | 8,722 | 3,217 | 9,253 | 3,084 | 29,504 | 3,242 | 24,595 | .. | 4,909 |
| Madura .. | 111 | 73,697 | 118 | 82,574 | 3,372 | 6,309 | 3,198 | 5,738 | 3,483 | 80,006 | 3,316 | 88,312 | 8,306 | .. |
| Tinnevelly .. | 83 | 47,870 | 82 | 55,784 | 1,907 | 4,703 | 1,906 | 5,159 | 1,990 | 52,573 | 1,988 | 60,943 | 8,370 | .. |
| Vernacular Training School. | .. | .. | .. | .. | 499 | 1,677 | 552 | 1,608 | 499 | 1,677 | 552 | 1,608 | .. | 69 |
| Special working plans office. | .. | .. | .. | .. | 185 | 1,528 | 197 | 1,600 | 185 | 1,528 | 197 | 1,600 | 72 | .. |
| Total .. | 500 | 2,85,121 | 541 | 3,72,995 | 20,872 | 57,311 | 21,253 | 59,163 | 21,372 | 3,42,432 | 21,794 | 4,32,158 | 89,726 | .. |
| *Western Circle.* | | | | | | | | | | | | | | |
| Direction .. | 1 | 74 | 1 | 70 | 380 | 4,987 | 385 | 5,135 | 381 | 5,061 | 386 | 5,205 | 144 | .. |
| Mangalore, North. | 25 | 17,136 | 32 | 18,997 | 1,012 | 3,740 | 962 | 3,708 | 1,037 | 20,876 | 994 | 22,705 | 1,829 | .. |
| Do. South. | 28 | 7,521 | 24 | 8,052 | 1,041 | 3,532 | 1,112 | 4,316 | 1,069 | 11,053 | 1,136 | 12,368 | 1,315 | .. |
| Malabar, North | 72 | 39,270 | 74 | 40,960 | 9,832 | 6,856 | 4,545 | 6,420 | 9,904 | 46,126 | 4,622 | 47,380 | 1,254 | .. |
| Do. South. | 46 | 39,907 | 51 | 40,931 | 1,640 | 5,713 | 1,645 | 6,095 | 1,686 | 45,620 | 1,696 | 47,026 | 1,406 | .. |
| The Nilgiris .. | 67 | 39,195 | 68 | 39,826 | 1,483 | 13,611 | 1,902 | 14,299 | 1,550 | 52,806 | 1,970 | 54,125 | 1,319 | .. |
| Kollegal .. | 35 | 28,733 | 34 | 25,356 | 4,833 | 6,618 | 1,970 | 6,230 | 4,868 | 35,351 | 2,004 | 31,586 | .. | 3,765 |
| Coimbatore, North. | 71 | 57,533 | 78 | 65,819 | 3,429 | 11,213 | 3,394 | 12,112 | 3,500 | 68,746 | 3,472 | 77,931 | 9,185 | .. |
| Do. Central | 55 | 24,036 | 61 | 27,910 | 7,665 | 8,404 | 7,867 | 8,527 | 7,720 | 32,440 | 7,928 | 36,437 | 3,997 | .. |
| Do. South. | 66 | 32,527 | 69 | 34,856 | 3,826 | 11,630 | 2,523 | 9,992 | 3,892 | 44,157 | 2,592 | 44,848 | 691 | .. |
| Vernacular Training School. | .. | .. | .. | .. | 328 | 1,267 | 332 | 1,108 | 328 | 1,267 | 332 | 1,108 | .. | 159 |
| Total .. | 466 | 2,85,932 | 492 | 3,02,777 | 35,469 | 77,571 | 26,640 | 77,942 | 35,935 | 3,63,503 | 27,132 | 3,80,719 | 17,216 | .. |
| Grand total .. | 2,105 | 11,44,757 | 2,174 | 12,46,152 | 138,878 | 3,06,053 | 131,438 | 2,90,634 | 140,983 | 14,50,810 | 133,612 | 15,36,786 | 85,976 | .. |

* Correct figures furnished by the District Forest Officers.

(a) Excludes 558 articles belonging to Parlakimedi Maliahs.
(b) Do. Rs. 2,253-5-0 being value of 558 articles belonging to Parlakimedi Maliahs.
(c) Do. 654 articles belonging to Parlakimedi Maliahs.
(d) Do. Rs. 1,291-12-6 being value of 654 articles belonging to Parlakimedi Maliahs.
(e) Do. Rs. 961-8-6 against the year on account of Parlakimedi Maliahs.

GOVERNMENT OF MADRAS

REVENUE DEPARTMENT

READ—the following paper :—

**Proceedings of the Board of Revenue (Land Revenue), Forest No. 156, dated 14th November 1916.**

The Hon'ble Mr. M. E. COUCHMAN, I.C.S.,
Commissioner of Land Revenue and Forests.

The Board submits to Government its progress report of Forest administration in the Madras Presidency for the year ending 30th June 1916.

2. The reports of the Conservators of Forests have been consolidated under each of the various heads with reference to the orders of Government contained in G.O. No. 2183, Revenue, dated 23rd September 1916. The attention of Conservators will be drawn to the table of contents appended to the letter from the Government of India, Revenue and Agriculture (Forest), communicated with Board's Proceedings, Forest No. 175, dated 29th August 1904, and they will be requested to follow the headings closely in drafting their future annual reports, so that there may be no difficulty in collating the matter under each head in the manner now ordered by Government.

3. *Alteration in area.*—Some twenty square miles, mostly in Central Coimbatore (10 square miles) and Anantapur (8 square miles), were constituted reserved forests during the year. There were also the following changes :—

(i) a decrease of 3 square miles caused by the rectification of boundaries in *Kistna*;

(ii) a decrease of 42 square miles due to the disafforestation of areas which were abandoned in pursuance of the policy of giving up small scattered forests : 10 square miles in *Ganjām*, 8 square miles in *Nellore*, 7 square miles in *Chittoor*, 6 square miles in *North Coimbatore*, 4 square miles in each of the districts of *Anantapur* and *Cuddapah West*, 2 square miles in *South Arcot* and 1 square mile, in the aggregate, in *Chingleput* and *Madura*;

(iii) a loss in *Trichinopoly* of 5 square miles of land which was transferred to the Public Works Department;

(iv) an apparent increase of 2 square miles due to excess found on resurvey of kancha areas in *Nellore*; and

(v) a similar excess of 2 square miles discovered during forest settlement in *Trichinopoly*. The net result of these changes was a decrease of 26 square miles in the total area of reserved forests, which stood at 18,849 square miles at the close of the year. The area of reserved lands also fell from 761 to 734 square miles. About 11 square miles were newly notified under section 4 of the Forest Act. Twenty square miles were notified under section 16.

4. *Forest Settlement.*—As in the previous years, forest settlement work was carried out by Revenue Divisional Officers. Out of a total area of 567 square miles which awaited settlement at the close of the year, the Northern Circle alone accounts for 492 square miles. Four large blocks, covering an area of about 483 square miles, were awaiting settlement in the districts of *Ganjām* and *Gōdāvari*. The settlement papers in respect of two large blocks, viz., Chokkapad (64·69 square miles) and Pedamidisileru (96·48 square miles) have been received in the Board's office and are under revision and still form the subject of correspondence with the local officers. The Collector of *Gōdāvari* will be requested to expedite the submission of the section 16 notification of the Nugur block (area 246·61 square miles), the details of the reservation of which are reported to be still under discussion. He has already been instructed to proceed with the reservation of the Coringa Extension block (75 square miles) in view of the fact that the Coringa forest appeal, which was made to the Privy Council, has ended in favour of Government. As to the Southern Circle, the Board has submitted to Government the report of Mr. E. A. Davis, I.C.S., regarding the reservation of about 50 square miles in the Pachamalais and Kollimalais, in the Attur taluk, South

*Salem* division, and has recommended the appointment of a special Forest Settlement officer for the reservation of the unreserves referred to. Forest Settlement work is practically complete in the Central and Western Circles.

5. *Demarcation.*—The total length of boundaries at the close of the year was 35,605 miles (or 1,385 miles less than in the previous year), of which 1,882 miles do not require artificial demarcation. The total length of artificially marked boundaries at the close of the year was 33,185 miles, of which 118 miles were demarcated for the first time during the year, against 246 miles in the previous year. Five hundred and thirty-eight miles remained still to be demarcated at the close of the year, principally in the districts of *Kollegal* and *Madura*, as in the previous year. The length of old boundaries repaired during the year was 17,644 miles, against 19,435 miles in the previous year; of this length 11,438 miles were cleared by subordinates free of cost against 12,400 miles in 1914–15. The average cost per mile of fresh demarcation rose from Rs. 33–10–6 to Rs. 36–5–3 but the cost of repairs fell from Rs. 3–6–3 to Rs. 2–11–7. The cost of fresh demarcation and repairs increased in the Western Circle and that of repairs only in the Northern Circle. These variations have not been explained notwithstanding the instructions on the point conveyed in paragraph 4 of Board's Proceedings Forest No. 161, dated 17th November 1915. The Board hopes that the omission will not recur. The Special Forest establishment, appointed for the verification and permanent demarcation of forest reserves in the Nilgiri district, started work in October 1915 and verified the boundaries of 49 reserved forests in Ootacamund taluk, of which 39 miles have been demarcated. In G.O. No. 2038, Revenue, dated 6th September 1916, Government ordered the continuance of this work to ensure the preservation from damage and encroachment of the forests, most of which contain valuable sholas. It is reported that eight miles of the proposed new boundary between the Nilgiris and Coimbatore were demarcated and about five miles roughly aligned. The report called for in paragraph 3 of G.O. No. 95, Revenue, dated 15th January 1916, was submitted to Government in Board's Forest Reference No. 2982–10–19, dated 14th September 1916. The Board has recommended that the new boundary, as settled in 1912, should be adhered to and that its demarcation should be continued.

6. *Surveys.*—The survey of India finally surveyed on the two inches scale certain reserves in *East Cuddapah*, *Chingleput* and *Chittoor*, aggregating an area of about 30 square miles. The party commenced work on the four inches scale in *Nellore* in April last in accordance with G.O. No. 479, Revenue, dated 1st March 1916, and the work is reported to be progressing. The Special Forest Map Officer, Mr. Descubes, completed the preparation of the maps of all Forest divisions and his services were terminated on 31st March 1916. It is reported that some of these maps are being made ready for publication in the Forest Map office at Dehra Dun. A surveyor deputed by the Madras Survey Department rectified the errors in the survey of five of the estates in the Anamalais; he was relieved on 10th June owing to the outbreak of the monsoon. The Collector of Coimbatore has since applied for sanction for his employment for a further period of six months during the current year to complete the survey of 12 estates still remaining to be surveyed and the proposal has been referred back to him for further details. Miscellaneous work, such as survey of coupes, alignment of roads and fire lines, verification of boundaries and preparation of coupe and working-plan maps, was done by departmental surveyors.

## Management of Forests.

### (1) *Regulation and management.*

7. *Working-plans.*—In its proposals for the reorganisation of the controlling staff of the department which were submitted to Government during the year, the Board has provided for five Imperial and five Provincial officers, whose duty is to be the preparation of working-plans. The successful working of the forests depends in a large measure on the care and accuracy of the enumeration, estimates and forecasts contained in working-plans, and District Forest Officers are seldom able to devote to this branch of work that continuous and close personal attention which is essential. During the year, working-plans were sanctioned for 441 square miles and plans were under preparation for 2,527 square miles. The working plan for the sandal forests of

the Javadis, prepared by Mr. C. C. Wilson, Special Working-Plans Officer, was sanctioned during the year and another important working plan for the fuel forests of the *Madura* district prepared by the same officer was sanctioned after its close. The Hosur sandalwood working plan, also prepared by Mr. Wilson, is now under the Board's consideration. As in the case of his report on the sandalwood of the Chitteris and the Javadis, the detailed enumeration of the Hosur sandalwood forests shows that the value of the sandal forests has been underestimated and that, given proper management and attention, they should be capable of yielding a much larger revenue. At the end of the year, Mr. Wilson was transferred to the Western Circle and has since prepared a reconnaisance report for the Tekkadi leased forest. In the Northern Circle, an interim working plan was prepared for the forest of Goomsūr and Pondakhol by Mr. Minchin, District Forest Officer, and sanctioned by the Board. Mr. Bourne is preparing the final working plan for the Nilambur teak plantations. Instructions were issued for the preparation of a working plan for the Sandur leased forests, Bellary district. The work is to be entrusted to M.R.Ry. E. V. Padmanabha Pillai, Extra Assistant Conservator of Forests.

8. There are still about 5,846 square miles of forest for which no working plans have been prepared, and of the existing working-plans there are many which require revision.

(2) *Communications and buildings.*

9. The following statement compares, with the figures of the previous year, the expenditure during the year on the construction and maintenance of roads and bridges and buildings in the four circles:—

| | Roads and bridges. | | Buildings. | |
|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| | R. | Rs. | Rs. | Rs. |
| Northern Circle .. .. .. .. .. | 32,333 | 31,462 | 31,216 | 26,649 |
| Central ,, .. .. .. .. .. | 15,670 | 12,181 | 33,510 | 22,461 |
| Southern ,, .. .. .. .. .. | 29,913 | 20,368 | 43,577 | 38,080 |
| Western ,, .. .. .. .. .. | 47,303 | 43,222 | 41,466 | 44,795 |
| Total .. | 1,25,219 | 1,08,233 | 1,49,769 | 1,31,985 |

Owing to the war expenditure was curtailed, and the total expenditure on both communications and buildings shows a decrease. The improvement of forest communications is, however, receiving careful attention, and during the year 441 miles of new cart roads, etc., were added. It is observed that under the head of roads and bridges a greater amount was spent on repairs (Rs. 64,535) than on new works (Rs. 43,326), and that under buildings the expenditure on new works (Rs. 80,720) exceeded that on repairs (Rs. 51,265). During the year the Board has approved schemes for the construction of roads and buildings which the Conservators of Forests have prepared in accordance with Mr. Beadon Bryant's recommendations. The temporary Forest Engineer (Mr. F. J. Marshall) has been placed under the control of the Forest Commissioner since the end of March. The services of the other Forest Engineer (Mr. A. J. Bright) were dispensed with, as he failed to give satisfaction. The most important works executed during the year under report were the alignment of 14 miles of the Alangayam-Komattiyar road in the *South Vellore* Division and the preparation of an estimate sanctioned in G.O. No. 975, Revenue, dated 1st May 1916, for Rs. 1,11,400 for its construction. The work is in progress. Estimates were prepared for the new Mount Stuart Ghat road.

The tramway in the Tekkadi leased forests was extended; it was worked at a profit of Rs. 1,441, against Rs. 2,416 in the previous year. With a decrease in the outturn of work the working charges showed an increase, which is attributed to the purchase of fresh materials and a temporary stoppage of work necessitated by an outbreak of anthrax. In *Nellore*, the laying of tram lines for fuel transport went on as usual. At Sriharikota and in the Coast range 1,518 tons and 927 tons of fuel were transported, an increase, in the former case, of 909 tons and a decrease, in the latter case, of 5,381 tons over the figures of last year. The tram lines and trucks in the district were lent to contractors

10. *Miscellaneous works.*—The expenditure under this head also decreased from Rs. 17,767 to Rs. 12,279. The chief works consisted, as usual, in fencing compounds and reserves and constructing and repairing tanks and wells. The telephone service in *South Coimbatore* is reported to be, on the whole, working satisfactorily.

(3) *Protection of forests.*

11. The following table compares the forest offences reported during the year with those of 1914-15 and with the average of the three years ending with 1914-15:—

| —— | Injury to forests by fire. | | Unauthorized felling and removal of forest produce. | | Unauthorized grazing. | | Other offences. | | Total. | | Average for three years ending 1914-15. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | 1914-15. | 1915-16. | |
| A. Cases taken to court. | 27 | 92 | 4,069 | 5,033 | 2,021 | 2,052 | 389 | 341 | 6,506 | 7,518 | 6,088 |
| B. Cases compounded. | 62 | 44 | 15,864 | 14,401 | 7,112 | 5,634 | 1,087 | 661 | 24,125 | 20,740 | 23,486 |
| C. Cases undetected. | 788 | 1,609 | 716 | 504 | 362 | 505 | 44 | 9 | 1,910 | 2,627 | 1,829 |
| Total .. | 877 | 1,745 | 20,649 | 19,938 | 9,495 | 8,191 | 1,520 | 1,011 | 32,541 | 30,885 | 31,403 |

It will be seen that the total number of offences reported is 1,656 less than in the preceding year and 518 less than the average for the three preceding years. Compared with the figures of the previous year, offences appreciably decreased in the districts of *Nellore*, *Chingleput* and *Trichinopoly*. The number of offences in the Southern Circle was 44 per cent and in the Central Circle 32 per cent of the total. Offences were most numerous in *Guntūr*, *Nellore* and in the Southern Circle, in which as noted in paragraph 10 of the last year's administration report, most of the reserved forests are scattered, of comparatively small area, and contiguous to villages and cultivation. It is hoped that some diminution of forest crime will result from the recommendations of the Forest Committee, to which effect is being given as fast as possible. In particular, the introduction of the forest village system for the more valuable forests, and the creation of village panchayats to manage minor forests in which grazing is the chief consideration should give the villagers an interest in the protection of the forests, and make it possible to reduce to a minimum contact between the subordinate Forest officials and the villagers.

12. The decrease in the number of offences reported occurred under all heads except "injury to forests by fire." The increase amounting to nearly 100 per cent in the number of offences of this class occurred in the districts of *Anantapur*, *Chittoor*, *South Vellore*, *North* and *South Salem*, *Madura*, *North* and *Central Coimbatore*; incendiarism and, to some extent, the exceptional dryness of the season in the last named two districts are the reported causes of these fires. The number of cases of illicit felling and illicit grazing decreased by 3·4 per cent and 13 per cent respectively. The decrease under the former head was most marked in the Central Circle and was shared by all districts comprised therein except *Bellary* and *Anantapur*; the decrease of illicit grazing occurred in the Southern Circle, notably in *South Arcot*, where the number of cases fell by 483. Of the fires 92 per cent were undetected. Detection of offences generally was poor in the districts of *Kurnool*, *South* and *West*, *Anantapur*, *Nellore*, *Chittoor*, the two *Vellores*, the two *Salems*, *Madura* and *North Coimbatore*. The Conservator, Western Circle, reports that the undetected offences of his circle are almost entirely cases of incendiarism and adds, by way of explanation, that whereas a number of undetected petty offences of other kinds are left unreported, every fire is reported, however trivial.

13. The percentage of all reported cases taken to court, compounded and undetected, was 24·34, 67·15 and 8·51, against 19·99, 74·14 and 5·87 in the previous year.

14. The total number of cases disposed of by magistrates rose from 6,737 to 8,061 and the percentage of acquittals to cases prosecuted fell from 7·9 to 7·2. The Collector of Kurnool has drawn attention to the need for a better knowledge of law and procedure on the part of rangers and deputy rangers. Attention is being paid

to this at the Madras Forest College. Students are also taken to watch the hearing of forest cases. An improvement may, therefore, be expected in this matter in the future.

15. The rules laid down by Government in G.Os. No. 1990, Revenue, dated 13th June 1910, and No. 3958, Revenue, dated 14th December 1910, for the guidance of Forest officers in compounding offences of illicit grazing worked satisfactorily in all districts.

16. The closure of forests to grazing as a punishment for systematic offences on a large scale was not considered necessary in any district, except *Vizagapatam*, *Gōdāvari*, *Chittoor* and *Tinnevelly*.

17. Rewards amounting to Rs. 903 were granted to informers and forest subordinates, against Rs. 2,023 in the previous year. It is reported that a few rewards were given for assistance rendered in the detection of forest offences in the Northern Circle, but the amount has not been specified.

18. *Fire protection.*—The system of fire protection was the same as in the pervious year, viz., the clearing of exterior and interior fire lines and patrol by watchers. The system, adopted in the South Kurnool Division in the previous years, of having boundary and fire lines cleared through the agency of purchasers of material thereon was extended in the same division. In areas over which special protection was attempted, the percentage of failure increased from 6·60 to 17 per cent, 1,150 out of a total of 6,763 square miles so dealt with having been burnt. The prolonged hot weather and the failure of the early rains produced unfavourable conditions; but many of the fires are attributed to deliberate incendiarism. The cost per square mile successfully protected was Rs. 20–12–7, against Rs. 23–9–8 in the previous year.

In *Upper Gōdāvari* the system of payment in lump for line clearing combined with the grant of proportionate rewards for successful protection was continued, but a large area was burnt by incendiaries. The matter is reported to be engaging the personal attention of the Collector. In *Lower Gōdāvari*, the services of hillmen were used, with the satisfactory result that the area protected was 97 per cent of the area taken up. In *South Coimbatore* also, the services of hillmen were enlisted in fire protection operation but the result is not reported. In *Kurnool East*, the Chenchus are reported to have set fire to the forests near Nagaluti and Pecheruvu in revenge for having been stopped from collecting fees from pilgrims to Sriselam, but the Chenchus of *West Kurnool* Division are reported to have worked hard to put out a fire which burnt 32,000 acres in the specially protected block of Nandyal range and is believed to have been the work of some timber thieves. In B.P. Forest No. 109, Mis., dated 3rd March 1916, the Board has recommended to Government the continuance of the system of granting rewards to Chenchus for fire protection, subject to the Conservator's suggestions for its improvement.

In addition to the area specially protected, the ordinary staff attempted to protect 9,309 square miles against 9,336 square miles in the previous year; of this area 8,607 square miles were successfully protected.

19. Fires were heaviest in the districts of *Upper Gōdāvari*, *Kurnool East* and *South*, *Bellary*, *Cuddapah East* and *North Coimbatore*. The area burnt from intention or malice was twice as large at in the previous year, and increased in *Ganjām*, *Kurnool East*, *Cuddapah East* and *West*, *Chittoor*, *South Vellore* and the *Nilgiris*.

20. The suggestion made by Mr. Cox, late Acting Conservator of Forests, Central Circle, and referred to in the previous year's report, that special annual reports on the subject of fire conservancy accompanied by maps should be submitted for each division in August and reviewed, was not supported by the other Conservators of Forests and was dropped by the Board, on the ground that with the existing staff the proposal was impracticable.

21. *Protection from cattle.*—3,512 square miles, or 18 per cent of the total area of reserved forests and reserved lands, were closed to cattle, sheep and goats throughout the year, and 178 square miles for part of the year; the corresponding figures for the previous year were 3,380 and 102 square miles. 204 square miles of reserved forests and reserved lands were open to goats, against 218 square miles open last year. From the close of 1915–16, goats have been excluded from all reserves except in portions of three reserves of the *Chingleput* district in the Central Circle. The area closed to

goats alone was 15,030 square miles and that closed to goats and sheep was over 659 square miles, the figures for the previous year being 15,292 and 647 square miles, respectively. A grazing scheme for the Guntūr district sanctioned in G.O. No. 1675, Revenue, dated 17th July 1915, was brought into force in the district during the year under report. In the *Nellore* district, the *Kancha* system of leasing out the grazing in the forests has made good progress. A Special Deputy Collector was appointed for six months to accelerate the movement. The Conservator reports that, besides protecting the forests in which grazing is allowed against fire, the lessee often undertakes the protection of closed areas as well. The Collector reports that revenue has gone up, that, with the withdrawal of the forest subordinates, friction has decreased, offences have considerably declined and informal panchayats are being formed.

22. An important step was taken during the year in the direction of associating the people with the Forest Department by the sanction given in G.O. No. 298, dated 10th February 1916, to the Forest village system. This system recognises that the ryots of those villages, which have contributed land for the formation of forest reserves, should receive preferential treatment as regards grazing and the grant of other privileges in such portions of the reserves as have been classed as "open." In return for this, they will be expected to take an active part in protecting the forests from fire and other damage.

23. The total number of animals licensed to graze on payment fell from 3,898,811 to 3,212,606. The decrease occurred under all the circles. In the Central Circle, it occurred in all districts and is attributed generally, subject to other causes peculiar to each district, to the transfer of reserves to panchayats for management. The Conservator, Southern Circle, gives this year also an interesting table showing the grazing incidence in each district based on the actuals of grazing permits, and states that forests cannot be expected to improve until the incidence is much reduced.

24. The number of cattle impounded was 175,903, against 208,393 in the previous year and 191,671, the average for three years ending 1915–16.

25. *Protection against injuries from natural causes.*—Spike disease continued its attacks upon sandal in *North Salem*, *Trichinopoly*, *Kollegal* and *North Coimbatore*, and is reported to be spreading gradually. The measures taken last year to check the spread of the disease in *Kollegal* proved a failure. Mr. T. N. Hearsey, Extra Assistant Conservator of Forests, was employed on special duty for the investigation of the disease in the sandal forests in *Salem*, and is reported to have made some interesting discoveries. No progress was made in the eradication of lantana, which was begun last year in *Tinnevelly*, but attempts are being made to combat this pest in several districts in the Western Circle. Teak defoliators continued to do much damage to the teak plantations in *South Malabar*. The identification of the jacids on teak leaves referred to in the Northern Circle report of the previous year is engaging the attention of the Forest Botanist, Dehra Dun; the insect continued to damage teak and *Anogeissus latifolia* in Nugur. Sambhur as usual continued to do a good deal of damage in *Tinnevelly*.

### (4) *Sylviculture.*

26. *Natural reproduction.*—Except in the Western Circle, which suffered severely from fires, the year was on the whole favourable for natural reproduction. It is satisfactory to find that sandal is more widely distributed than was formerly supposed and that in several areas it is spreading. Reproduction of *Pterocarpus santalinus* from coppice in *Cuddapah* and *Chittoor* was satisfactory. The flowering of the bamboo is spreading over large areas in several forest divisions in the Western Circle. The question of how to take advantage of the bamboo flowering in *South Coimbatore* "with a view to getting in a larger proportion of teak and other valuable timber trees" was under the consideration of the Working-plans officer after the close of the year. Natural regeneration of teak was not successful in the Western Circle owing to absence of the complete light which experience shows to be essential to teak if it is to reach the pole stage.

27. In accordance with the advice given by the Inspector-General of Forests during his tour in 1913, expenditure on artificial reproduction has been greatly reduced. In the year under report, it amounted to Rs. 18,973 against Rs. 25,572 in the previous year. Of this amount, Rs. 15,540 were spent on teak plantations in *West Kurnool* during the year, the principal object of this scheme being to provide work for the chentsus and divert them from crime.

28. *Operations for the improvement of the growing stock.*—The operations undertaken during the year consisted, as in the previous years, of improvement fellings, thinnings, fencing, creeper cutting, the removal of inferior species, dead and dying trees, parasites and noxious growth and weeds, and the building of stone walls in a few places, to protect the forests from trespass. Systematic and useful work in the removal of creeper growth over sandal areas was done in the Javadis and Yelagiris of *South Vellore* division and in the Chitteris of *South Salem*.

*Experiments.*—Successful experimental cultivation was carried out in the following districts :—

Sandal in *Kurnool South* and *Kistna*, *Eucalyptus globulus* in *East Cuddapah* and *Chittoor*, *Swietenia Mahogani* in *Chittoor*, *Pterocarpus santalinus* in *North Vellore*, and teak in the *Nilgiris* and *South Coimbatore*. The experiment of girdling sandalwood started in *South Vellore* for the purpose of increasing the heartwood is reported to be still in an imperfect stage. Mr. Nelson's bamboo pulp scheme in Malabar is, it is understood, under the further consideration of Government. Mr. T. Clear, District Forest Officer, *South Kurnool*, submitted a report during the year on a tour which he recently made in Northern India for the purpose of investigating the lac industry and Indian vegetable dyes.

(5) *Exploitation.*

29. *System of management—Major produce.*—The various methods of exploitation of major produce were, as in previous years, clear or regeneration fellings, thinnings, selection fellings and improvement fellings and coppice fellings. Clear or regeneration fellings were carried out mostly in *Ganjām*, *Gōdāvari Lower*, *Kistna*, *South Kurnool*, *South Arcot*, *Tinnevelly* and *South Malabar*. Selection fellings were, as usual, made in timber coupes or where it was found neceseary to eliminate dead and unsound trees. In the Southern Circle, bamboos were worked under this system. Improvement and coppice fellings were undertaken principally in fuel coupes and in a few timber coupes and bamboo areas. In the Southern Circle most of the areas in which improvement fellings were undertaken were sandal areas. Unregulated fellings under the permit system were made in Rampa, Lower Gōdāvari, and in some unreserves. In reserves this antiquated system was chiefly confined to the extraction of brushwood and *Avicennia officinalis* (mada) poles by the Public Works Department for river conservancy work in the Coringa reserve in *Lower Gōdāvari*, of selected and marked timber trees for domestic requirements in one range in *Madura*, of dead and wind-blown trees from certain reserves in the *Mangalore divisions*, of small timber and fuel in the *Nilgiris*, of some rosewood trees for special supply in *North Malabar*, and some *Xylia* trees from a reserve in *South Malabar*.

30. *Minor produce and fodder grass.*—Minor produce was generally leased out. Bamboos were removed on permits in six divisions in the Western Circle to meet local demand and for floating timber. The manufacture of catechu in *North Mangalore* and collection of miscellaneous produce in *Kollegal*, *Kurnool East and West*, in parts of *Nellore*, the *Nilgiris* and *South Coimbatore*, were carried out by departmental agency. Permits were issued in several districts for the removal of manure leaves, stones, gravel, etc. In the *Kurnools* Chentsu agency was employed for the collection of minor produce. In *Ganjām*, the enjoyment of fruit trees was generally left to the use of the Khonds. In *Vizagapatam* seigniorage was collected at the weekly markets from purchasers of produce collected by hillmen. Fodder grass was removed on permit in *Madura*, *Coimbatore*, and in parts of the *Nilgiris* and *South Malabar* and leased in *Gōdāvari Lower* and *Kistna*. In *Tinnevelly* grass was as usual included in minor produce leases. Ryots were allowed to cut and remove grass from reserves in all districts except in *Chingleput* in the Central Circle, where there was no demand, and in *North* and *South Vellore* and *South Arcot* in the Southern Circle. Free removal of thatching grass was allowed in the two *Mangalore* divisions and parts of the *Nilgiris*. In *Bellary*, 450 tons of hay were cut, on contract, against 240 tons in the previous year. The Military Department held leases of areas in *Bellary*, *Anantapur* and *East Cuddapah* and *Vellore North* at Rs. 2 per ton of hay removed.

31. *Hay making.*—No hay making operations were undertaken by the department during the year.

32. *Grazing.*—The revenue from grazing and fodder grass decreased from Rs. 6,96,334 to Rs. 6,86,571. There was an increase of Rs. 19,623 in the Central Circle, but it was counterbalanced by decreases in other circles. The increase in the Central Circle occurred chiefly in *Guntūr*, which owing to the enhancement of the

grazing fees brought in revenue exceeding by about Rs. 20,000 that of the previous year, and in *Nellore*, where the kancha system of grazing made good progress. The largely increased revenue realized in these two districts was however counterbalanced by decreases in other districts in the circle.

The decreased grazing revenue explained above is the inevitable result of the disafforestation of large areas of class VI reserves.

33. *Agency of exploitation.*—The subjoined table compares the outturn through all the agencies of timber, fuel, bamboos and minor produce with that of the preceding year :—

| Agency of exploitation. | | Timber including sandalwood in cubic feet. | | Fuel in cubic feet. | |
|---|---|---|---|---|---|
| | | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| (1) | | (2) | (3) | (4) | (5) |
| By Government Agency. | Northern Circle .. .. | 250,028 | 271,447 | 868,935 | 648,750 |
| | Central ,, .. .. | 11,071 | 19,816 | 36,063 | 24,321 |
| | Southern ,, .. .. | 19,338 | 17,281 | 62,294 | 70,432 |
| | Western ,, .. .. | 437,121 | 308,807 | 640,149 | 621,608 |
| | Total .. | 717,558 | 617,351 | 1,607,441 | 1,365,111 |
| By purchasers .. | Northern Circle .. .. | 1,288,226 | 906,369 | 4,459,851 | 4,074,398 |
| | Central ,, .. .. | 1,065,163 | 930,733 | 6,584,517 | 6,388,326 |
| | Southern ,, .. .. | 920,866 | 798,338 | 4,777,552 | 4,239,113 |
| | Western ,, .. .. | 468,886 | 379,143 | 3,937,306 | 3,218,887 |
| | Total .. | 3,743,141 | 3,014,583 | 19,759,226 | 17,920,724 |
| By right holders. | Northern Circle .. .. | 184,136 | 167,198 | 582,195 | 582,195 |
| | Central ,, .. .. | .. | .. | .. | .. |
| | Southern ,, .. .. | .. | .. | .. | .. |
| | Western ,, .. .. | 36,175 | 15,450 | .. | .. |
| | Total .. | 220,311 | 182,648 | 582,195 | 582,195 |
| By free grantees. | Northern Circle .. .. | 86,853 | 47,520 | .. | 3,462 |
| | Central ,, .. .. | 38,543 | 47,728 | .. | .. |
| | Southern ,, .. .. | 90,493 | 18,824 | 3,984 | 2,879 |
| | Western ,, .. .. | 3,761 | 4,385 | 340 | 580 |
| | Total .. | 219,650 | 118,457 | 4,324 | 6,921 |
| | Grand total .. | 4,900,660 | 3,933,039 | 21,953,186 | 19,874,951 |

| Agency of exploitation. | | Bamboos—value in rupees. | | Minor produce including grass and grazing—value in rupees. | |
|---|---|---|---|---|---|
| | | 1914-15. | 1915-16. | 1914-15. | 1915-16. |
| | | (6) | (7) | (8) | (9) |
| By Government agency. | Northern Circle .. .. | 6,550 | 4,523 | 12,844 | 8,314 |
| | Central ,, .. .. | 226 | 13 | 14,701 | 8,487 |
| | Southern ,, .. .. | 201 | 289 | 531 | 533 |
| | Western ,, .. .. | 5,373 | 5,772 | 24,151 | 20,518 |
| | Total .. | 12,350 | 10,597 | 52,227 | 37,852 |
| By purchasers .. | Northern Circle .. .. | 93,180 | 1,41,664 | 2,13,695 | 2,74,819 |
| | Central ,, .. .. | 14,945 | 17,301 | 6,31,218 | 7,63,001 |
| | Southern ,, .. .. | 1,01,789 | 1,10,692 | 3,82,215 | 3,76,879 |
| | Western ,, .. .. | 22,114 | 35,841 | 1,47,014 | 1,37,368 |
| | Total .. | 2,32,028 | 3,05,498 | 13,74,142 | 15,52,067 |
| By right holders. | Northern Circle .. .. | 552 | 407 | 24,649 | 23,869 |
| | Central ,, .. .. | .. | 167 | 151 | 138 |
| | Southern ,, .. .. | .. | .. | 2,105 | 1,115 |
| | Western ,, .. .. | .. | .. | 780 | .. |
| | Total .. | 552 | 574 | 27,685 | 25,122 |
| By free grantees. | Northern Circle .. .. | 671 | 278 | 2,836 | 119 |
| | Central ,, .. .. | 246 | .. | 1,320 | 313 |
| | Southern ,, .. .. | 303 | 454 | 5,267 | 5,819 |
| | Western ,, .. .. | 67 | 88 | 270 | 915 |
| | Total .. | 1,287 | 820 | 9,693 | 7,166 |
| | Grand total .. | 2,46,217 | 3,17,489 | 14,63,747 | 16,22,207 |

34. The quantity of timber removed by departmental agency decreased, mainly in the Western Circle, and the decrease was due in *South Malabar* to the smaller yields from the thinnings made in the plantations, and in *South Coimbatore* to the cessation of felling in the Tekkadi leased forests, pending the transport of a large stock lying in the forests. The quantity removed by purchasers was in all the circles less than in the previous year. In the Northern Circle this decrease was due to lack of demand, in the Central Circle to smaller removals from darkhast lands, in all districts of the Southern Circle, except *North Salem* and *Madura*, to a fall in the collection of tree value from lands assigned on darkhast, and in the Western Circle partly to a general fall in darkhast applications for land and in removals from unreserved lands; a lack of demand in *North Malabar* and a reduced outturn in *South Coimbatore* are also reported.

The quantity of fuel extracted both by departmental and private agencies decreased in all the circles except in the Southern, where the quantity removed by departmental agency slightly increased. The decrease in the amount of fuel removed by purchasers is attributed in the Northern Circle to the fact that a large number of plantations were sold in the previous year, in the Central Circle to a fall in the removals from unreserved lands, in the Southern Circle to the facts that a smaller number of coupes than usual were sold in the two *Vellore* divisions and in *Salem North* and *South* and that *patugais* were transferred to the Public Works Department. In the Western Circle, the decrease occurred chiefly in *South Canara* and *North Coimbatore* division but has not been explained.

35. The value of bamboos extracted by departmental agency decreased chiefly in the Northern Circle and is reported to be due to the extension of the contract system of working. The value of bamboos removed by purchasers increased in all the circles.

36. The value of minor produce extracted by departmental agency decreased in the Northern, Central and Western Circles and showed practically no change in the Southern Circle. The value of minor produce removed by purchasers increased in the Northern and Central Circles. There were, however, some small decreases in the other circles. In the Northern Circle, the increase was due to the favourable season and in the Central Circle to large collection of *tangedu* kists in *Bellary*, *Anantapur* and *East Cuddapah* and to the extension of the kancha system and a rise in the demand for mica in *Nellore*.

| | Right holders. | Free grantees. |
|---|---|---|
| | Rs. | Rs. |
| Northern Circle ... | 34,439 | 3,938 |
| Central „ ... | 138 | 5,910 |
| Southern „ ... | 1,115 | 8,608 |
| | | * 1,995 |
| Western „ ... | 6,180 | 1,789 |
| Total ... | 41,872 | 22,240 |

* At reduced rates.

37. The estimated value of forest produce removed by right holders was Rs. 41,872, against Rs. 53,291, and of produce granted free and at reduced rate, Rs. 22,240, against Rs. 29,073.

38. The following statement exhibits the financial results of the year as compared with those of the previous year and with the average of the preceding five years:—

| Years. | Revenue. | Expenditure. | | Total. | Surplus. |
|---|---|---|---|---|---|
| | | A. Conservancy and works. | B. Establishments. | | |
| | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1915-16 .. .. .. .. | 39,38,475 | 10,97,505 | 15,10,444 | 26,07,949 | 13,30,526 |
| 1914-15 .. .. .. .. | 40,17,852 | 13,89,296 | 15,47,355 | 29,36,651 | 10,81,201 |
| Average for the five years ending 1914-15. | 40,39,040 | 16,37,305 | 14,59,643 | 30,96,948 | 9,42,092 |

The revenue fell by Rs. ·79 lakh, and the expenditure under A. Conservancy and Works and B. Establishments also fell by Rs. 2·91 and ·37 lakhs respectively. The net result was a surplus of Rs. 13·31 lakhs, which is Rs. 2·49 lakhs more than that of the previous year and is the highest yet recorded. This large surplus is partly explained by the postponement of all avoidable expenditure on account of the war. The Central Circle stands first with a surplus of Rs. 6·04 lakhs and the Southern Circle next with Rs. 4·61 lakhs, against Rs. 4·39 lakhs and Rs. 6·22 lakhs,

the figures for the previous year. The Northern Circle shows a surplus of Rs. ·73 lakh against Rs. ·39 lakh in the previous year, while the Western Circle returns an unprecedented surplus of Rs. 1·93 lakhs against a deficit of Rs. ·19 lakh in the previous year. One noticeable feature of the year under this head was that the surplus was distributed over all the circles.

39. The noticeable variation was the increase of Rs. ·91 lakh which occurred in the Central Circle and was due mainly to higher grazing receipts in *Guntūr* and *Nellore* and to heavier receipts under minor forest produce in several districts of the circle. There was also an increase of about Rs. ·60 lakh in the Western Circle, due mainly to the better prices realized by the sale of elephants, the leasing of additional lands, increased rents from the Anamalai estates and larger sales of timber in four forest divisions. This was counterbalanced by a large decrease of Rs. 2·04 lakhs in the Southern Circle, accounted for by the sale in the previous year of valuable casuarina plantations in *South Arcot* and *Tanjore*, the transfer of the control of forest padugais to the Public Works Department, and, generally, to the concentration of work on hill rather than plain forest. The increase in the Northern Circle was small and calls for no remarks.

40. The expenditure under "A. Conservancy and Works" decreased by Rs. 2·92 lakhs, the abnormal expenditure of last year being due mainly to the acquisition of the Mudumalai and Kumbarakolli forests in the *Nilgiris* (Western Circle) at a cost of nearly Rs. $1\frac{3}{4}$ lakhs. During the year expenditure was curtailed, mainly under the head of "Communications and buildings," on account of the war. In the Central and Southern Circles, the further reason assigned for the decrease is the abandonment of cultural operations, the absence of any large expenditure such as was incurred last year on account of compensation for acquisition of land in *Guntūr*, and the reduction in the number of watchers in the Southern Circle.

Expenditure under "B. Establishments" also decreased in all circles except the Western.

41. *Administration.*—The Hon'ble Mr. H. F. W. Gillman, I.C.S., was head of the forest administration throughout the year. He toured in the districts of *Nellore*, *North Arcot*, *the Nilgiris*, *South Arcot*, *Coimbatore*, *Mangalore South*, *Malabar*, *Ganjām* and *Chingleput*. His inspection in the *Nellore* district was in connection with the settlement of the Mutharachas and Madigas who had been evicted from the Udayagiridurgam hill reserves. In *South Arcot* and *Chingleput*, the Forest Commissioner visited many forests and examined the classification and suitability for panchayat management of some of them. Copies of the inspection notes recorded at the time have already been submitted to Government. The tour in *North Arcot* was in connection with the future administration of the Puliyur-Kambugudi enclosure in the Javadis; Government passed orders on the Board's proposals in G.O. No. 2687, Revenue, dated 3rd December 1915. On the *Nilgiris* Mr. Gillman inspected the demarcation of reserves in progress and the new district boundary between the Nilgiris and Coimbatore. The new township and the estates on the Anamalais were inspected in the *Coimbatore* district. In his tour in *South Canara*, the Forest Commissioner visited forests from which overmature timber was being extracted, was convinced that other forests in the district remained unexploited owing to want of establishment and soon after obtained the sanction of Government for the immediate bifurcation of the district.

42. Mr. P. M. Lushington was in charge of the Southern Circle throughout the year. Mr. A. W. Lushington held charge of the Northern Circle until the 21st September 1915, when he retired from service and was succeeded by Mr. F. L. C. Cowley-Brown. Mr. S. Cox held charge of the Central Circle until 17th December 1915 and Mr. H. B. Bryant for the rest of the year. The charge of the Western Circle was held by Mr. C. D. McCarthy up to 12th April 1916 and by Mr. H. A. Latham for the rest of the year. The Conservators inspected all the District Forest offices, except those of *Bellary*, *Anantapur*, *Madura* and *Tinnevelly*. The offices of the first-named two districts were inspected after the close of the year. The Conservators also recorded inspection notes of the forests visited by them in the districts of *West* and *East Cuddapah*, *Nellore*, *Chingleput*, *Chittoor*, *South Salem*, *Trichinopoly*, *South Arcot*, *North Vellore* (for the Ameredi plantation). The touring of the Conservators of

Forests, Northern, Central and Southern Circles, was adequate ; the touring of the Conservator, Western Circle, though short, has been satisfactorily explained. All District Forest offices, except those of *West Cuddapah*, *Trichinopoly*, *Madura*, *South Canara* and *South Malabar*, spent a sufficient number of days in touring : the short touring of the excepted officers has also been satisfactorily explained.

All range offices except two in each of the districts of *South Kurnool* and *South Coimbatore* and one in each of the districts of *Nellore*, *Tinnevelly* and *Central Coimbatore* were inspected by the District Forest Officers. The accounts of District Forest offices except those of *Bellary*, *South Malabar* and *North Coimbatore* were inspected by auditors from the Accountant-General's office and the results were reported to be generally satisfactory.

43. An important change in the administration was effected by G.O. No. 260, Revenue, dated 7th February 1916, which modified the relative position of the District Forest Officer and the Collector. The District Forest Officer was declared to be the head of the Forest Department in his own district and the Conservator was made responsible for, and given control over, all professional, departmental and financial matters in his circle and invested with independent authority regarding the appointment, transfer and punishment of subordinate forest officials. These orders gave rise to some misapprehension and as the result of a discussion of the subject which the Forest Commissioner held with the Conservators in June last, the Board requested Government to define more clearly the relation between the Collector and the District Forest Officer. The work of classifying the forests in accordance with the orders of Government passed on the reports of the Forest Committee has been completed in all districts, except a portion of *Kurnool East*, and *South Arcot*.

Mr. E. A. Davis, I.C.S., continued on special duty for the purpose of accelerating the introduction of panchayats for the management of forests in which grazing was of primary importance. His special duty terminated on 21st August 1916. In the course of his tours he visited all the districts in which there was a good prospect of introducing the panchayat system and selected areas suitable for panchayat in consultation with the Collectors and District Forest Officers. The Board has already recorded its appreciation of the good work done by Mr. Davis.

During the year 147 panchayats have been managing 134, 273 acres (nearly 210 sq. miles) of reserved forests and unreserved land declared reserved land for the purposes of panchayat management. In the previous year there were only 76 panchayats, managing about 56 sq. miles.

The reports received on the working of the panchayats show that on the whole they have worked well. In a few instances goats were allowed to browse in the forest and there was overgrazing, illicit felling and hacking for manure leaves. The Board has expressed its opinion that these defects may be largely ascribed to ignorance, and that there is a disposition to remedy defects where these have been pointed out. The sympathy and supervision of the Revenue Department and especially of Revenue Divisional Officers will be essential if the panchayat system is to be a success. The report of Mr. H. M. Hood, I.C.S., who was placed on special duty for the civilisation of the Chentsus on the Nallamalais in the Kurnool district is under the consideration of Government.

Proposals have been submitted for the reorganisation of the controlling staff of the Forest Department. Similar proposals will shortly be submitted for the subordinate staff. The appointment of a Special Forest Officer on a salary of Rs. 350—50—700 for the Golgonda agency and Hill Madgole in the *Vizayapatam* district was sanctioned by Government and Mr. N. E. Shrigley was appointed to the post. Government have also sanctioned a permanent post of Special Veterinary Inspector for the charge of elephants in the Forest Department on a salary of Rs. 125–17½–300.

An additional forest charge was sanctioned and formed in South Canara. Government have also sanctioned the division of *North Arcot* into three forest charges but the scheme has not yet been given effect to. The proposal to constitute a third forest division in *Cuddapah* has also been approved by Government. *Kurnool* and *Gōdāvari* will be dealt with next on the same lines.

44. An industrial exhibition was held in Madras during the Christmas week of December last under the auspices of the Madras War Fund Committee, of which His Excellency the Governor was the President. Mr. Bourne was in immediate charge of the Forest section and was responsible for the excellent arrangement of the exhibits most of which were drawn from the Gass Forest Museum at *Coimbatore*. The section was granted a diploma of excellence by the Exhibition Committee.

45. The present Forest Commissioner has not been in charge of the department long enough to justify his making any comments on the work of the Conservators.

Among District Forest Officers, Mr. Arbuthnot in *Nellore* is reported to have worked hard and well during the year. In *Madura* Mr. A. B. Jackson's vigour and energy is remarked upon by the Collector. M.R.Ry. K. R. Venkatarama Ayyar was promoted to the class of Extra Deputy Conservator for exceptionally good work in *South Vellore* and Mr. C. P. Wilson has done excellent work as Special Working Plan Officer.

The Forest Assistant M.R.Ry. Rao Sahib K. Gundu Rao Avargal received his title during the year for good work.

46. *The Forest College, Coimbatore.*—One important event of the year was the opening of the new college buildings by His Excellency Lord Pentland who had himself laid the foundation stone of the buildings in April 1913. His Excellency, for the second time during the year, honoured the college with his presence on the 29th June, when he gave away the certificates and prizes, including the Pentland Shield of which His Excellency was the donor; the shield is awarded to the best all-round athlete of the year, and is tenable for one year only. At the close of the year the third batch of students passed out of the college. They were 29 in all, of whom one, a Government student, won the honors certificate and carried away most of the prizes. Seventeen obtained the higher standard certificates and five the lower standard, and six failed to qualify for any certificate. The final examinations in all the subjects were conducted by examiners from outside the staff of the College. But for the rule, brought into force for the first time, that conduct marks are not to count towards the marks necessary for qualification for the several certificates, the Principal states two more students would have obtained honours certificate.

The high proportion of failures is attributed to the low standard of intelligence and the poor educational equipment of these students. Conservators have been requested to make a more judicious selection in future, and the Principal has been instructed to send down such as do not possess the capacity to follow and profit by the course as soon as the fact is apparent; on this point he should be in a position to decide in the early part of the course, after the results of the first periodical examinations are known, at the latest. The examiners have given some useful practical hints for the training of the students and the Principal has noted them.

The 1915–17 division started in August 1915 with 36 students, of whom four were sent down in December as unfit for training, and one was dismissed for misconduct. There thus remained 31 in residence at the close of the year. Two more were subsequently removed, and the second year course of 1915–17 started with 29 students.

47. *General rules under the Forest Act.*—The working of the timber and sandalwood transit rules was satisfactory. The revised timber transit rules for *South Malabar* division were sanctioned and introduced from 1st April 1916. The revised rules for the collection and disposal of driftwood were sanctioned and brought into force during the year in *Gōdāvari Upper*, *Lower*, and *Kistna*. The people generally availed themselves of the privileges allowed by the rules under section 26 of the Forest Act and there were no complaints of any importance except from *Kurnool West*, where a good deal of timber was smuggled from the unreserves in the Yerramalais.

*Improvement of water-supply in Government grazing grounds* (*G.O. No.* 1622, *Revenue, dated 4th June* 1914).—In the Northern Circle, wells and forest springs were epaired or deepened in *Kistna*, *Gōdāvari Lower* and *Kurnool East* and *South*. In *Kurnool West* on account of the war no works were undertaken and in the remaining

districts in the circle no measures were considered necessary during the year. In the Central Circle, new wells were dug in *Anantapur*, and the existing ones repaired or deepened in *Guntūr*, *West* and *East Cuddapah* and *Nellore*. In *Chingleput*, the ryots of a village were permitted to repair the tank in Acharapakkam reserve for the use of the village cattle. Nothing of the kind was done in other districts. In the Southern Circle, some progress was made with the repair of wells and tanks in the two *Vellores* and *North Salem*. It is reported that in *South Vellore*, the Director of Industries is conducting boring operations with a view to introducing "tube-wells" and that the introduction of these wells will go a great way towards improving the drinking-water supply and thus conduce to the reduction of fever on the Javadis. No measures in this direction were considered necessary in the Western Circle, except in two divisions of *Coimbatore* where, for want of funds, nothing was done, and in *South Coimbatore* where the grazing question still remained unsettled.

*Opening of small coupes in the vicinity of villages for rural supply.—Paragraph* 20 *of the orders of Government on the Forest Committee's Report.*—The Conservator, Northern Circle, reports that coupes in convenient localities were sold to contractors to meet the wants of the people living near the forests. In the Central Circle coupes were opened wherever there was a local demand; in the Southern Circle the sale of fuel at the edge of the forests was generally conducted by coupe contractors; in the Western Circle no such measures were necessary, as the demand for fuel was met from coupes sold to contractors and other sources.

*Patrol system—Paragraph* 22 (1) *of the Government Order on the Forest Committee's Report.*—In the Northern Circle, the system has been introduced in all divisions except *Upper Gōdāvari* and its working is reported to be satisfactory in *Kurnool East* and *South*. The system is being tried in all districts in the Central Circle, except *Anantapur*, *Chittoor* and *Chingleput*, and the work of the patrol parties is reported to be satisfactory in the districts of *Guntūr*, *West* and *East Cuddapah*. In the Southern Circle, the system was continued in *North Vellore*, *South Arcot* and *South Salem*, but owing to the smallness of the establishment it was scarcely a success. In the Western Circle the system was tentatively introduced in only one district, *Central Coimbatore*, and that was after the close of the year. It is hoped that, when the reorganisation of the subordinate staff, which will shortly be submitted to Government, is sanctioned and brought into force, the working of the system will be attended with better success.

*Inducement of villagers to aid in the work of conserving adjoining forests—Paragraph* 22 (2) *of the Government Order on the Forest Committee's Report.*—Government have passed orders on the Board's proposals for the introduction of the forest village system into the Madras Presidency which is designed to secure the co-operation of the people in the working of the Forest Department by giving them an interest in the result. It is hoped that an improvement may be anticipated from the operation of the scheme in the efficient protection of forests. The extension of the kancha system of grazing in *Nellore* is an instance in point.

48. *Forest Conference.*—Three conferences were held by the Forest Commissioner with the Conservators of Forests during the year—two at *Coimbatore* and one at *Madras* and various forest matters were discussed. In July 1915 His Excellency the Governor held an informal conference with the Revenue and Forest officers of the *Kurnool* district.

49. *Forest literature.*—Mr. R. D. Richmond, Deputy Conservator of Forests, had a Manual of Sylviculture under preparation and M.R.Ry. K. R. Venkataramana Ayyar, Extra Deputy Conservator of Forests, had in hand a Manual of Range Administration.

50. A memorandum of minor discrepancies found in the circle reports is appended.

(True Extract)

H. R. PATE,
*Secretary.*

To the Secretary to Government, Revenue Department, with Appendices.

# APPENDIX.

## Northern Circle.

(1) *Form No.* 71.—(*a*) The figures 391 and 148 in the column "Total cases" against A and B in the *Vizagapatam* district are mistakes for 148 and 391.

(*b*) The number of compounded cases is shown as 2,410 in the column of "Acquittals" in the statement, while it is shown as 2,467 in paragraph 13 of the Circle report.

(2) *Form No.* 72—(*a*) The figures 66,365 and 488,706 against Total Kurnool West are mistakes for 84,274 and 470,797.

(*b*) The figures 435,608 and 2,513,461 against Grand total are mistakes for 453,517 and 2,495,552.

(3) *Form No.* 74.—The figure in column 27 against Gōdāvari Upper is a mistake for 11,077.

(4) *Form No.* 76.—(i) The figures 315,914, 430,199, 131,336 and 395,333 against Grand total in page xii are mistakes in totalling for 302,292, 416,577, 144,958 and 408,955 respectively.

(ii) The figures 513,256 and 1,907,146 entered in column 32 "Total outturn" at page xiii against "Gōdāvari Lower" and "Total, unreserved lands" in the set of figures below "IV Unreserved lands" are mistakes for 514,056 and 1,908,946.

(5) (*a*) In the first statement at page 12 of the Circle report, the figures shown under the column Fuel in cubic feet against "Purchasers (including confiscation)" viz. 445,985 and 14,074,398 are mistakes for 4,459,851 and 4,074,398.

(*b*) In the same statement the value of bamboos removed by departmental agency during 1915–16 is shown as Rs. 4,523, while in Annual Form No. 77 at page xiv of the appendices it is shown as Rs. 4,533. The discrepancy has not been explained.

(6) In Form No. 80 at page xviii of the appendices, the cost of forest settlement is shown as Rs. 193, in the district of Ganjām (Rs. 57) and Gōdāvari Lower (Rs. 136), while in column 13 of Form No. 66 it is shown as nil. The discrepancy has not been explained.

## Central Circle.

(1) *Form No.* 67.—In the districts noted in the margin, the totals of columns 3 and 4 of the return do not agree, as they should, with column 5 of the previous year's return at page xii of the appendices to the report for 1914–15. The discrepancies should have been explained by adding a footnote to the return.

| | Columns 3 and 4. | Column 5 of the previous year's return. |
|---|---|---|
| | MILES. | MILES. |
| Bellary .. .. .. | 1,731 | 1,746 |
| Cuddapah West .. .. | 1,370 | 1,378 |
| Nellore .. .. .. | 1,995 | 2,069 |
| Chingleput .. .. | 868 | 904 |
| Chittoor .. .. .. | 1,447 | 1,470 |

(2) *Form No.* 71.—Forest offences withdrawn as well as those compounded should be exhibited under the heading of "Acquittals" in columns 11 and 12 with reference to G.O. No. 1101, Revenue, dated 8th May 1915.

(3) *Form No.* 77.—The value of grazing and fodder grass removed by purchasers is shown as Rs. 3,21,843 in column 5 of the statement, while in Form No. 80 the revenue realised from the Circle from the same source is shown as Rs. 3,18,777. The discrepancy has not been explained.

(4) In Form No. 80 at page xv of the appendices the cost of forest settlement is shown as Rs. 152, Rs. 781 and Rs. —73 in the districts of Cuddapah West, Cuddapah East and Nellore, respectively, while in column 13 of Form No. 66 it is shown as nil in each of these districts. The discrepancy has not been explained.

## Southern Circle.

(1) *Form No.* 65.—(*a*) The total of column 8 excluding 13 acres of reserved land referred to is 46,862 and not 46,865.

(*b*) The area of reserved forests, viz., 2,781,672 acres, works out to 4,346 square miles and not 4,347 square miles as shown in column 7 of the return.

(2) *Form No.* 67.—The cost of demarcation in the Tinnevelly district is entered as Rs. 514 in the last column of the statement. In Form No. 80 at page xviii of the appendices, it is shown as Rs. 486. The discrepancy has not been explained.

(3) *Form No.* 71.—Pages viii and ix of the appendix—

(i) 110 (*a*) entered in column 2 against *Trichinopoly* is a mistake for 116 (*a*).

(ii) The figure " 7 " entered in the column of " Acquittals " against *Tinnevelly* is evidently a misprint for 9.

(iii) Forest offences withdrawn as well as those compounded should be exhibited under the heading of " Acquittals " in columns 11 and 12 with reference to G.O. No. 1101, Revenue, dated 8th May 1915.

(4) In Form No. 80 at page xviii of the appendices, the cost of forest settlement in the several districts in the Southern Circle is shown as Rs. 8,960, while in column 14 of Form No. 66 it is shown as Rs. 2,909. The discrepancy has not been explained.

WESTERN CIRCLE.

(1) *Form No.* 71.—Forest offences withdrawn as well as those compounded should be exhibited under the heading of " Acquittals " in columns 11 and 12 with reference to G.O. No. 1101, Revenue, dated 8th May 1915.

(2) *Form No.* 77.—The value of grazing and fodder grass removed by purchasers is shown as Rs. 78,658 in column 5 of the statement. In Form No. 80 the revenue realized from the same source is shown as Rs. 79,322. The discrepancy has not been explained.

(3) In Form No. 80 at page xxiii of the appendices the cost of forest settlement in North Coimbatore is shown as Rs. 326, while in column 14 of Form No. 66 it is shown as nil. The discrepancy has not been explained.

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**Order—No. 246, Revenue, dated 26th January 1917.**

| Forest No. 11-A. | Recorded. |
|---|---|

2. *Paragraph* 4 *of the Board's Resolution.*—The Government note that some progress has been made in forest settlement in the Upper Gōdāvari Forest division the slow progress in which was the subject of comment in paragraph 2 of the Government review for the previous year. It is observed, however, that much still remains to be done.

3. *Paragraphs* 11, 12, 13 *and* 18 *of the Board's Resolution.*—The Government are glad to see that there has been a decrease in the number of forest offences. There has, however, been an increase in incendiarism, which is not altogether explained by the dryness of the season. It is hoped that the further extension of the system of forest panchayats and the introduction of the forest village system may result in a reduction in the number of fires by giving villagers more personal interest in the preservation of neighbouring forests.

It is noted that the assistance of hill tribes is being enlisted on the side of the Forest Department, a fact which is creditable to all local officers concerned. Some trouble has been experienced with the Chentsus of East Kurnool division; but the relations between them and the department may be expected to improve as a result of the recent appointment of an officer to exercise special supervision over this tribe.

4. *Paragraph* 43 *of the Board's Resolution.*—The number of forest panchayats has increased from 76 to 147 and the area managed by them from 56 to 210 square miles. There is still a large area capable of being brought under private management if the Board's anticipation in its last report that one-tenth of the area of reserved forests will ultimately pass out of departmental control is ever to be fulfilled. But, as has recently been pointed out by Government, it is absolutely necessary to proceed with caution and to make sure that the earliest panchayats in each district are started under conditions which promise successful working.

5. *Paragraphs* 21 *to* 24 *of the Board's Resolution.*—The reduction in the number of animals licensed to graze in reserved forests is attributed in part to the spread of forest panchayats. The introduction of the forest village system should tend in the

same direction. A further reduction in the grazing incidence is necessary in many districts, as shown by the Conservator of Forests, Southern Circle, in paragraph 67 of his circle report. The Board of Revenue is requested to note on the subject in its next report in such detail as may be found necessary.

6. *Paragraph 33 of the Board's Resolution.*—The financial results of the year's working are not so satisfactory as they seem for the reason that the unusually large difference between receipts and expenditure is due to the restriction of capital expenditure in accordance with the policy of rigid economy imposed by the war.

7. *Paragraph 43 of the Board's Resolution.*—The Government have received proposals for the reorganization of the controlling staff of the Forest Department and have addressed the Government of India on the subject. The Board's proposals for the reorganization of the subordinate staff are awaited.

8. *Paragraph 46 of the Board's Resolution.*—The number of failures at the Forest College is regrettably large. The Board of Revenue has reported repeatedly in this matter, and their suggestions have received the approval of the Government.

(True Extract)

A. R. KNAPP,
*Acting Secretary to Government.*

To the Board of Revenue, Land Revenue (Forests).
,, Accountant-General.
,, Government of India, Department of Revenue and Agriculture (with C.L.).
,, Inspector-General of Forests (with C.L.).
Editors' Table

# ANNUAL ADMINISTRATION REPORT

OF THE

# FOREST DEPARTMENT

OF THE

# MADRAS PRESIDENCY

FOR THE

## TWELVE MONTHS ENDING 30TH JUNE 1917

## 1916-1917

MADRAS:

PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS

1917

## ERRATA TO THE FOREST ADMINISTRATION REPORT FOR 1916-17.

(1) *Paragraph* 34, *page* 11 *of the Circle reports.*—In line 14 *insert* a full stop after the word " bridle path ", and in line 15, *delete* the words " were constructed ".

(2) *Paragraph* 42, *page* 13.—In the second line of the sub-paragraph *insert* " and " as the first word.

(3) *Paragraph* 80, *page* 25.—In the beginning of line 3 of the sub-paragraph under " cultural operations ", *for* the word " and " *substitute* " but ".

(4) *Paragraph* 139, *page* 36.—In line 4 *for* the word " Malaiyalis " *substitute* " Malayalis ".

(5) *Paragraph* 141, *page* 36.—In line 7, leave space between the words " of " and " timber ".

(6) *Paragraph* 145, *page* 37.—*Insert* " (*c*) " before the words " outturn and sources of Forest produce ", printed as heading.

(7) *Paragraph* 148, *page* 39.—In line 6 of the sub-paragraph under " By purchasers—Major produce ", *for* the words " 40 infra " *substitute* " 152 infra ".

(8) *Paragraph* 152, *page* 43.—*Insert* the words " Western Circle " in the margin against the paragraph.

(9) *Paragraph* 152, *page* 44.—In line 4 of the sub-paragraph under " Expenditure—A Conservancy and Works ", *for* the word " Nilgirs " *substitute* " Nilgiris ".

(10) *Page* 47.—In line 2 of the first sub-paragraph under (*b*) after the words " South Vellore " *insert* the words " for the benefit of the students of the Madras Forest College who have a standing camp at that place " and *delete* the word " Forest " in the third line of the same sub-paragraph

(11) *Paragraph* 228, *page* 57.—In line 3, *insert* the word " they " between the words " done " and " were ".

(12) *Paragraph* 273, *page* 67.—In last line *for* " low landers " *substitute* " lowlanders ".

(13) *Page* 75.—In the sub-paragraph under " Health and conduct of students ", *for* the word " Phyrexia " *substitute* " Pyrexia " and *for* the word " gastrites ", *substitute* " gastritis ".

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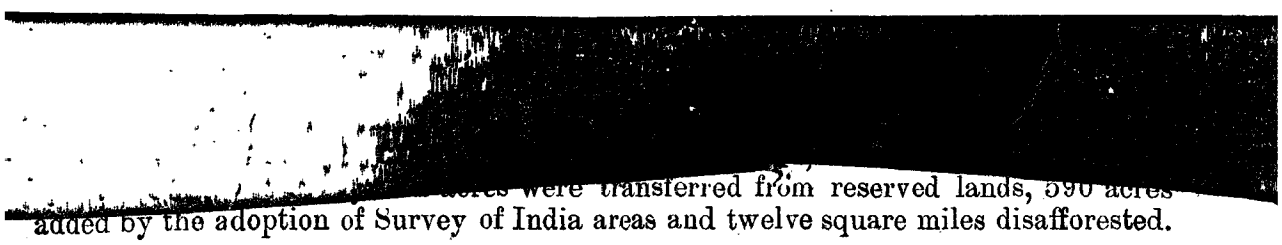

were transferred from reserved lands, 590 acres added by the adoption of Survey of India areas and twelve square miles disafforested.

# ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

FOREST YEAR ENDING 30TH JUNE 1917.

## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in area.

*Northern Circle.*

The following statement shows the abstract of changes in forest areas :—

| Class. | Area on 1st July 1916. | Added during the year. | Excluded during the year. | Area on 30th June 1917. |
|---|---|---|---|---|
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Reserved forests .. .. .. . .. | 4,605 | 5 | 3 | 4,607 |
| Do. lands .. .. .. .. .. | 492 | 1 | 8 | 485 |
| Leased forests .. .. .. .. . | 2 | .. | .. | 2 |
| Total .. | 5,099 | 6 | 11 | 5,094 |

*Reserved forests.*—Four square miles in *Gōdāvari Upper* and a block of less than a square mile in *Ganjām* were finally constituted reserved forests and an area aggregating one square mile was added in *Gōdāvari Upper*, *Lower* and in *Kistna* by rectification of area, two square miles in *Kistna* and one square mile in *Kurnool West* were disafforested.

*Reserved lands.*—Four square miles were transferred to reserved forests in *Gōdāvari Upper* and *Ganjām*, the initial notifications in *Gōdāvari Upper* in respect of four square miles were cancelled and in *Kistna* the disafforested reserve of Gunadala was renotified by the Collector under rule 5 of the rules under section 26 of the Forest Act and handed over to a Revenue panchayat.

*Central Circle.*

2. *Reserved forests.*—The total area decreased from 5,755 to 5,729 square miles. Six hundred and thirty acres were transferred from reserved lands and 1,271 were added by resurvey. Sixteen thousand five hundred and thirty acres were disafforested, and 17 acres were transferred to Revenue Department. Two thousand one hundred and twenty acres were handed over to Putlampalli shrotriemdar out of which 1,768 acres were acquired under section 4 notification sanctioned in Board's Proceedings Forest No. 78, dated 23rd May 1916.

*Reserved lands.*—The area remained the same. Four hundred and twenty-seven acres were notified under section 4 and 630 were transferred to reserved forests.

*Southern Circle.*

3. *Reserved forests.*—Four hundred and sixty-one acres were added by transfer from reserved lands and 1,441 acres disafforested.

*Reserved lands.*—Nine hundred and sixty-seven acres were notified reserved lands, 190 acres were thrown out at Forest Settlement and initial notifications in respect of 155 acres were cancelled.

The total area of the reserved forests and reserved lands at the close of the year was 4,406 square miles against 4,408 square miles of the previous year.

*Western Circle.*

4 *Reserved forests.*—The total area decreased from 4,142 to 4,133 square miles. One thousand and thirty-four acres were transferred from reserved lands, 590 acres added by the adoption of Survey of India areas and twelve square miles disafforested.

*Reserved lands.*—One hundred and fifty-two acres consisting of enclosures in reserved forests and unreserved lands and 44·0 acres owing to the adoption of Survey of India areas were added. 1,034 acres were transferred to reserved forests and 14 acres excluded at settlement. Sixty-seven acres of toda patta lands in the *Nilgiris* were notified under section 4 of the Forest Act. The area at the close of the year was 105 square miles, of which 96 are leased forests in the *Nilgiris* and *South Malabar* and 4·5 "toda patta" lands in the former division.

## 2. Forest Settlement.

*Northern Circle.*

5. Of the eleven blocks (492 square miles) remaining unsettled at the commencement of the year four blocks were transferred to reserved forests, the initial notifications in respect of two blocks were cancelled, two blocks were settled, but reservation took effect after the close of the year and three blocks (418 square miles) were left unsettled at the end of the year. Of these three, two are pending in the *Upper* and one in the *Lower Gōdāvari.*

*Central Circle.*

6. Two blocks in *Anantapur*, two in *South Cuddapah* and two in *Nellore* were finally settled. Eight blocks are pending final settlement and 22 are undergoing settlement as noted in Form No. 66.

*Southern Circle.*

7. Settlement is complete in all districts except North and South Salem and Trichinopoly.

*North Salem.*—Final reports for the four blocks comprised in Udedurgam reserve which were forwarded to the Board have been returned for revision and one of these is pending with the Forest Settlement Officer.

*South Salem.*—The settlement of the Jarugumalai block is pending with the Collector to whom appeals have been preferred by some of the claimants under section 14 of the Forest Act. The appeal filed in the Sessions Court by the claimants of Arana and Thirthagiri blocks is still pending.

*Trichinopoly.*—Final reports in respect of Gundūr and Ariyur Shola blocks which were submitted to the Board have been returned for revision and are pending with the Revenue Divisional Officer.

*Western Circle.*

8. Four blocks in the *Nilgiris*, six in *Kollegal* and one block in each of *Central* and *South Coimbatore* aggregating 1·6 square miles, were finally settled and transferred to reserved forests. Four blocks of ·333 square mile were brought under settlement. The balance under settlement at the close of the year was eleven blocks of 3·7 square miles; but the actual settlement of two of these was completed. The delay in the settlement of three pending blocks in *North Coimbatore* has been taken notice of by the Collector.

## 3. Demarcation.

*Northern Circle.*

9. The demarcation of 24 miles of reserve boundary in *Vizagapatam* was carried out at a cost of Rs. 359. Maintenance of 588 miles of boundary cost Rs. 2,461 the remainder 4,288 miles being kept up by forest subordinates free of cost. The average cost per mile of demarcation was Rs. 14–15–4 and of repairs Rs. 4–2–11 against Rs. 22–0–0 and Rs. 5–10–9 respectively in the previous year; the decreased cost is due to half the cost having been incurred in the previous year and the decrease under repairs is due to the exclusion of the cost of sign boards, etc., now properly debited to other heads.

*Central Circle.*

10. Five miles were newly demarcated in *Bellary* at a cost of Rs. 95. Fourteen miles in *Anantapur* at a cost of Rs. 191 and Rs. 4,756 was spent in repairing and improving 4,376 miles of the existing boundaries already demarcated. The decrease in expenditure is due to the curtailment of expenditure owing to the war. One hundred miles of permanent demarcation with solid stone pillars surrounded by well-packed cairns of stones and with a lock-spit or a two feet wide stone alignment were completed.

*Southern Circl .*

11. Final demarcation was carried out in Madura over a length of 67 miles. In South Arcot, the outer boundaries in all class II reserves were verified with the notification and sketch. In North Salem, Rs. 689 was spent during the year in the verification and rectification of reserve boundaries and enclosures. A great deal of

work in this direction has still to be done more especially in the demarcation of enclosures in North Salem and on Javadis in South and West Vellore. 68·5 miles remained to be permanently demarcated at the close of the year of which 59 miles are in Madura. Rupees 1,300 were spent from political funds in demarcating the Madura-Travancore boundary to a length of 30 miles.

Out of the total length of 7,632 miles of old boundaries repaired during the year, 6,547 miles are reported to have been cleared or repaired free of cost by subordinates and the balance of 1,085 miles was cleared at a cost of Rs. 1,569.

*Western Circle.*

12. *New boundaries.*—Four miles in *North Malabar*, six in the *Nilgiris* and two in *North Coimbatore* were demarcated at a total cost of Rs. 966. The six miles in the *Nilgiris* included 4½ miles of newly cut district boundary between that district and *Coimbatore*. The average cost per mile of fresh demarcation rose from Rs. 61–6–6 to Rs. 80–8–0. The increase was due to heavy clearing of jungle and increased cost of trenching in *North Malabar* and to inaccessibility and scarcity of labour in the *Nilgiris*. *Old boundaries.*—The length of old boundaries repaired during the year was 1,165 miles against 848 miles in the previous year; of this length 665 miles were cleared by subordinates free of cost. The subordinates continued to maintain boundaries in *Mangalore*, the *Nilgiris* and *Kollegal*, but the results were not recorded; no clearing was reported to have been done in *South Malabar*. One hundred and twenty-four miles which included ten miles of district boundary were repaired in the *Nilgiris*. This was practically fresh and substantial demarcation in accordance with the verification by the special staff. The average cost per mile of repairs increased from Rs. 31–5–7 to Rs. 45–15–0. The increase was mainly in the *Nilgiris* and was due to the reasons assigned for the increased cost of fresh demarcation.

The total length of boundaries at the close of the year was 7,997 miles of which 6,743 miles were demarcated and 886 miles do not require artificial demarcation; the balance that remained still to be demarcated was 368 miles of which 223 miles were in *Kollegal*. Progress could not be made owing to the financial restrictions.

## 4. Forest Surveys.

### (*a*) *By Survey of India.*

*Northern Circle.*

13. The preparation of special Divisional maps of *Ganjām*, *East*, *South* and *West Kurnools* on the scale of four miles to one inch was taken in hand and the "India" diagram showing annual revenue, expenditure and surplus for the 10 years 1905–06 to 1914–15 was published.

### (*b*) *By Departmental Survey.*

During the year Rs. 5,389 were spent on forest surveys. No final maps were prepared although maps were wanting for 124 square miles of forests in *Kistna*, three square miles in *Kurnool East*, 95 in *Kurnool South* and 280 in *Kurnool West* as reported in the previous year. The field work during the year consisted chiefly in the verification of boundaries, alignment of roads and fire lines and preparation of coupe, working-plan, fire and other maps, a work which appears to have been considerably overlooked in the past.

### (*a*) *By Survey of India.*

*Central Circle.*

14. During the year the party confined its operations to *Nellore* district only. 114·537 square miles were surveyed on 4″ scale and 64·592 square miles on 2″ scale.

### *By Madras Survey Party.*

One surveyor was deputed to *West Cuddapah* to survey the discrepant boundaries of Yerrakonda.

### (*b*) *By Departmental Surveys.*

During the year, the reconnaissance report for Adōni range referred to in the last report was completed and Board's orders obtained in Board's Proceedings, Forest No. 27, dated 1st March 1917. One surveyor was appointed in *West Cuddapah* in the latter part of the year to survey Idupulapaya palmyra plantation.

Survey of coupes, verification and rectification of boundaries, alignment of roads and the preparation of coupe, working-plan and fire maps were as usual done by the departmental staff.

(*c*) *Maps.*

The reference maps referred to in section 80 of the Forest Code are reported to have been maintained and posted in all the districts.

Two maps published during the year by the Forest Map Officer are (1) Red Sanders area in Cuddapah district and (2) India diagram.

(*a*) *By the Survey of India Party.*

*Southern Circle.* 15. No surveys were undertaken.

(*b*) *Madras Survey Party.*

The revision survey operations by the Madras Survey Party continued in Madura, South Arcot and South Vellore and the Forest discrepancy sketches have been returned verified.

(*c*) *By Departmental Survey.*

All coupes were surveyed by ordinary staff except in North and South Salem where surveyors were employed and in Madura where similar work was done by a supervisor.

A variety of survey works such as verification of reserve boundaries, surveying and aligning of roads and surveying and demarcation of old coupes was done by the existing staff and departmental surveyors.

(*d*) *Maps.*

*Reference maps referred to in section* 80 *of the Forest Code.*—These are reported to have been maintained in all districts.

(*a*) *By the Survey of India Party.*

*Western Circle.* 16. A special surveyor deputed by the Survey of India completed the final survey of nine teak plantations covering 3,206 acres in *South Malabar* and prepared maps for them on 8-inch scale. One hundred and twenty-two chains in the New Amarampalam reserve were also surveyed by theodolite. The total cost amounted to Rs. 2,585.

(*b*) *Local Surveys.*

All coupes, two small roads and areas under improvement fellings in *Mangalore South*, areas under ponam cultivation in *North Malabar* and two bridle paths in *Kollegal*, were surveyed departmentally. A surveyor deputed by the Madras Survey department completed the survey of seven estates on the Anamalais and another surveyor from the same department surveyed and recleared five and a half miles of the Cochin frontier boundary.

(*c*) *Maps.*

*Reference maps under section* 80 *of the Madras Forest Code.*—These are reported to have been maintained and posted except the range reference maps in *Kollegal* which were being prepared.

*Special district reference maps.*—The maps of *Malabar* divisions were in the Forest Map office at Dehra Dun pending publication.

## CHAPTER II. MANAGEMENT OF STATE FORESTS.

### I. Regulation of management.

(*a*) *Preparation and control of regular working plans.*

*Northern Circle.* 17. *Preparation.*—In *Ganjām* the original intention to prepare a Working Plan for the intensive working of the "Sal" area amounting to about 10 per cent of the entire reserved forest area and one on more general lines for the other 90 per cent was modified under the oral advice of the Inspector-General of Forests who visited

this Presidency and it was decided that a single plan with a uniform system for the two better classes of pure plains Sal areas should be prepared. Further at the suggestion of the Inspector-General the District Forest Officer visited the Sal forests near Dehra Dun and Gorakhpur so as to see for himself the new treatments which are being applied to similar Sal forests in the United Provinces. Observation areas in which effects of clear felling, sowing and improvement fellings of varying intensities could be watched were laid out and with the aid of the additional establishment sanctioned the work of selection, demarcation and mapping of Sal blocks is proceeding smoothly and expeditiously, so much so that a reconnaissance report will soon be prepared and the final plan may be expected to be finished by March 1918. In *Vizagapatam* Mr. D. A. Stracey, Extra Assistant Conservator, prepared a working-plan for the grazing in the Yellamanchili working circle comprising nine square miles which include an area of two square miles for which there is already a working-plan. This is held up as it apparently does not fall in with the "village grazing" scheme propounded some time ago. Working-plans for the systematic working of bamboos on a five-year rotation are under preparation by the District Forest Officer. In *Gōdāvari Upper* a preliminary tentative working-plan for an area of 107 square miles of Marrigudem range was prepared by the District Forest Officer and has been sanctioned since the close of the year. In *Gōdāvari Lower* a tentative working scheme for 233 square miles in Peddapur and Gokavaram ranges was sanctioned towards the close of the year and preliminary working-plans for Polavaram and Rajahmundry ranges comprising an area of 147 square miles are under preparation. In *Kurnool East* a preliminary working-plan for Cumbum range comprising an area of 195 square miles was prepared, but it is still under revision and recompilation.

18. *Control.*—The prescriptions of the sanctioned working-plans have been generally adhered to except in the following:—

*Ganjām*—Timber in certain unreserves prescribed for departmental extraction was leased to contractors, listing of dead and dying trees in a block was not done for want of establishment and three bamboo coupes were not sold as they fell in the beat of one or more man-eating tigers. An estimate for a road was not completed, alignment not having been finished, construction of a road diversion was dropped and a portion of a road which fell in arrears was constructed, erection of a bridge was given up in favour of a road-dam, construction of kitchens and out-houses for certain range quarters, two inspection sheds with out-houses and a subordinate's quarters and certain wells were deferred principally on account of the general shortage of funds caused by the war.

*Vizagapatam.*—The cutting and burning of an outer boundary not prescribed in the working-plan was newly sanctioned and the privilege of free removal of timber to the people of Makaram valley was withdrawn under Board's orders in its Proceedings Forest No. 1497, Routine, dated 9th December 1916, as they had ample unreserves close to their village.

*Gōdāvari Lower.*—The prescriptions of the working-plan of the Kandikuppa Casuarina Plantation were not followed as the area has to be disafforested after the standing growth has been disposed of. Pending sanction of a revised working-plan for the Coringa reserve, the tentative plan of operations based on the prescriptions to be observed is being followed with the Board's approval.

*Kistna.*—A timber coupe was not sold for want of demand. In no case is the whole area to be cut over a year completed: in Kondapalli and Bandamcherla no attempt is made to work except on the fairly level ground.

*Kurnool South.*—Coupes for timber and fuel not provided for in the working-plans of Chelama, Sirvel and Giddalore ranges were worked under improvement fellings.

*Kurnool West.*—The stone walling in the Yerramalais in Kurnool West was postponed till the end of the year.

*Revision.*—A revised working-plan prepared for the 11 square miles of Mangrove forests of Coringa reserve in *Gōdavari Lower* was returned by the Board for further revision and rotation of the Upputeru working-plan in *Kistna* was increased from 5 to 10 years.

New working-plans for Berhampur range in *Ganjām* and for Gundlakamma and Owk ranges in *Kurnool South* are required: the period of 10 years for the Terai working-plans in *Kurnool West* having expired, its revision is being considered. It appears too that the *Kistna* working-plans all or nearly all require revision.

*Central Circle.*

19. *Preparation.*—In *Bellary*, the reconnaissance report for the Adōni range forests was approved by the Board in Board's Proceedings, Forest No. 27, dated 1st March 1917. The simple working-plan for the forests of the Harpanahalli range was tentatively approved by the Conservator. The working-plan for Sandur leased forest was submitted to the Board. In *Guntūr*, the following working-plans were tentatively approved by the Conservator:—Babul areas of Lam, Kolakalur and Kuragallu working circles, Takkellapad and Kondavid working plans. Tentative working schemes for the forests of Sattenapalle and Repalle taluks were received from the District Forest Officer but they were returned for further revision and that for Bapatla taluk is under correspondence. In *North Cuddapah* division, Palakonda fuel working circle sanctioned in Board's Proceedings, Forest No. 127, dated 8th July 1908, and Lankamalais Bullmen fuel working circle, Sidhout series sanctioned in Board's Proceedings, Forest No. 150, dated 1st August 1908, were cancelled by the Board in Board's Proceedings, Forest Nos. 1272, Routine, dated 23rd October 1916 and 1355, Routine, dated 10th November 1916, respectively. Re-allocation of coupes in Nandalur-Vontimitta fuel working circle was sanctioned in Board's Proceedings, Forest No. 261, Mis., dated 31st August 1916. In *West Cuddapah*, a working-plan for Idupulapaya Palmyra plantation has been prepared and is being submitted to Board for sanction. In *Nellore*, a working-plan for the Podalakur, Prabhagiripatnam and Ayyagaripalem reserves in the Rapur range was sanctioned in Board's Proceedings, Forest No. 63, dated 22nd May 1917. In *Chingleput*, a revised working-plan for the forests of the Chingleput range was sanctioned in Board's Proceedings, Forest No. 67, dated 16th June 1917, and a similar plan for the forests of the Tiruvallur range was submitted to Board. In *Chittoor*, all the old working-plans in the district were cancelled in Board's Proceedings, Forest No. 298, Mis., dated 11th October 1916, and revised plans are under preparation.

No satisfactory progress in the preparation of working-plans is possible with the present hopelessly inadequate forest staff.

20. *Control—Bellary.*—All coupes in the Harpanahalli working-plans except one were sold. *Anantapur.*—Compartment No. I of Katrimela West, Coupe III of Penukonda and Rallahalli working circles and compartment I of Rallahalli and compartment II of Southern working circles were thrown open to grazing being V class reserves. The working-plans in this district are also in need of revision. *Guntur.*—The working-plans for Lam, Kuragallu and Takkellapad were put in force from 1st April 1917. *North Cuddapah.*—The prescribed coupes in Sidhout, Kanamalopalli, Ponnole series, Badvel East, Sancherla and Porumamilla South fuel working circles were not sold as there were arrear coupes to be sold first. Badvel West series and Porumamilla North series were not worked for want of demand. *South Cuddapah.*—Three coupes were not sold for want of demand. *West Cuddapah and Chittoor.*—The prescriptions were generally adhered to. *Nellore.*—Some coupes were not sold partly due to shortage of Railway rolling stock and partly to previous coupes remaining unfelled. *Chingleput.*—Several arrear coupes were sold and five grazing blocks were sold under the kancha system.

*Southern Circle.*

21. *Preparation.*—The working-plan for the Palar river side plantations in North Arcot, the Hosur sandalwood working-plan in North Salem and the revised working-plan for the fuel forests of the Madura district referred to in the previous year's report were sanctioned during the year.

*South Arcot.*—Simple working-plans for the class II forests of the Tirukkoyilūr range and Talanayar and Kodiakadu reserved forests of Tanjore district were prepared and are being scrutinized.

*North Salem.*—A preliminary working scheme for the sandalwood areas in Dharmapuri range was sanctioned by the Conservator. Reconnaissance reports for revised plans in the Dharmapuri and Krishnagiri ranges were prepared and approved by the Conservator.

*South Salem.*—A revised working-plan for the Kouramalai group of reserves has been sanctioned by the Board.

*Trichinopoly.*—A draft working-plan for 16·37 square miles of Cassan forests in the Udayarpalayam is being prepared but has not as yet been submitted for sanction.

*Tinnevelly.*—A working-plans party was sanctioned after the close of the year and has begun work in this district.

22. *Control.*—The prescriptions of the working-plans have generally been adhered to with the following important exceptions:—

*North Vellore.*—Out of 40 fuel coupes selected according to the Conservator's instructions for exploitation during the year, only 23 were sold.

*South Vellore.*—Out of 32 fuel coupes proposed for working during the year, 30 coupes (2,183 acres) were worked and the remaining two (99 acres) have since been sold in 1917–18.

In addition to the ordinary fellings in coupe II of each of the sandalwood fellings series, an extraordinary felling had to be undertaken during the year which was necessitated by the cyclone of the 22nd November 1916. Consequently work was postponed in coupe No. III of each series. A similar policy was pursued in West Vellore.

*West Vellore.*—Out of 8 fuel coupes (1,080 acres) proposed for working during the year, only 5 coupes (737 acres) were worked.

*South Arcot.*—The prescriptions of the working-plans were not adhered to owing to changes in the classification of reserves and the general policy of opening for cultivation the plains reserves of this district. In consequence the growth on 32,423 acres was sold outright.

*North Salem.*—Except for the sandal areas in the three hill ranges, the working-plans are under revision.

*South Salem.*—Out of 43 fuel coupes proposed for working, only 21 were worked.

*Trichinopoly.*—This district, like South Arcot, is at present in a state of flux. Reserves in the plains are either being given up for cultivation or placed under panchayat management. Similarly the policy for the hill forests is being altered so as to place sandal extraction on a better footing and to win the co-operation of the Malayalees. In consequence, the prescriptions of the old working-plan are completely out of date.

*Madura.*—As but little progress could be made on road work under the provision of the new working-plan a re-allotment of coupes was necessitated in eight felling series. The eradication of prickly-pear in two felling series was postponed as the estimate of cost greatly exceeded that given in the working-plan.

23. *Preparation.*—Mr. Wilson, Special Working-plans Officer, had enumerations made in two out of the 36 compartments of Tekadi leased forests covering 17,414 acres and prepared the report of his working-plan reconnaissance He was deputed to military duty by the middle of October 1916 after which M.R.Ry. M. R. Sundram Ayyar, Probationary Extra Assistant Conservator, continued the work of enumeration and Mr. Wood took charge of the special staff from the latter end of January 1917. The enumeration was started under the classification (1) healthy and (2) dead and hollow trees. It was afterwards found that this classification would give a very false idea of the saleable outturn but unfortunately not until almost the whole of the Tekadi compartments had been finished. The classification was then changed to (1) serviceable (2) unserviceable (for timber production) and three compartments were re-enumerated, in the hope that some sufficiently constant factor would work out between the serviceable and healthy classes of the two countings so as to save a re-enumeration of the whole working circle *de novo*. This was not successful from that point of view and three other compartments were taken in hand. The results lately received indicate that the re-enumeration just referred to cannot be avoided. Tree analyses are also in progress. *Western Circle.*

*Revision.*—Mr. Bourne with a special staff continued to collect data and statistics which are voluminous for completing the preparation of the final working-plan for the teak plantations in *South Malabar*. An addendum to the working-plan for the *Nilgiri* plantations laying down a felling series for six years in block I of the Coonoor Eucalyptus coppice working circle was sanctioned. The Gobichettipalayam

working-plan in *North Coimbatore* was revised. By this revision, an additional area of three square miles was brought under its operation and the felling series were rearranged. The revised working-plans for the forests of Mettupalayam range and for Tadagam reserve in *Central Coimbatore* were sanctioned. The revision of the plan for the forests of Erode range could not be taken up as the District Forest Officer was engaged in other works and found no leisure to attend to it. We have come to the end of the Begur and Chedleth working-plans in *North Malabar* and as soon as the working-plan party has finished with Tekadi it will be sent there.

There are still 1,385 square miles for which working-plans have to be prepared and many of the sanctioned working-plans in the circle require revision.

24. *Control.*—The prescriptions of the working-plans were generally adhered to with the following important deviations: *Mangalore North*— Many of the fuel coupes set apart for the supply of sandal stills in Udipi range could not be worked for want of demand. *Mangalore South*— The felling in Shiradi timber working circle was behindhand by four years and the Puttur town fuel working circle was closed for want of demand. *North Malabar*— The felling in Chedleth coupe II is backward owing to failure of the contractor to whom coupes were sold in 1915. The *Nilgiris*— Compartment 5 of Mudumalai working circle was worked instead of compartment 4 owing to the delay in the construction of bridges on the Thorapalli road. Compartment 8, block II of Coonoor Acacia working circle, prescribed for 1915–16 was felled during the year. A portion of compartment 3, block VI Governorshola working circle, in which regular felling is not prescribed was felled to supplement the supply of firewood to Ootacamund town. *Kollegal*— The felling in Araipalayam fuel coupes was in arrears owing to lack of demand and to the large area prescribed for annual working. The sandal working plans in *Kollegal* and *North Coimbatore* have been abandoned owing to the ravages of "spike" which has disorganized all the schemes. Fuel coupe X of Kavalur working circle in *North Coimbatore* which is devoid of growth was given up and the next coupe felled. The working plans for Talamalai range in *North Coimbatore*, Bolampatti blocks in *Central Coimbatore* and Talinji working circle in *South Coimbatore* remained unworkable as in previous years. *Central Coimbatore*— Bamboos were not extracted from Sholakarai and Walayar working circles owing to extermination of bamboos after seeding three years back. The timber operations in the Varigali valley and planting operations in compartment II of Mount Stuart working circle were not undertaken; the working plans are under revision. The felling in coupes IX and X of Punachi working circle continued but only dead trees and those damaged by fire were felled. The fuel coupes in all the working circles were felled but their prescribed size being unworkable was not adhered to.

25. *Preliminary working-plans reports.*—Systematic working in two bamboo coupes in *Mangalore South*, three fuel coupes in *Kollegal*, ten fuel, twelve bamboo and three sandalwood coupes in *North Coimbatore* and three fuel and three bamboo coupes in *Central Coimbatore* were carried out. The statistics for the preparation of formal schemes in *North Coimbatore* were complete.

### (*b*) *Annual plan of operations.*

*Northern Circle.*

26. The sanctioned plans of operations were generally followed, except as detailed under working-plans above and in the following cases:—

*Ganjām.*—Departmental working of timber was given up where contractors were available and vice versa; six fuel coupes and one bamboo coupe which were not down for working were sold as demand was found for them; 4,285 lb. of Bassia latifolia seeds were collected and supplied without profit to Dowgam oil mills for experimental purposes and 200 bags of myrabolams were collected departmentally to increase the supply of tanning materials; the construction of two furlongs of road and quarters for a Range officer was taken up; the proposed forest poramboke lands of the Uriya parts of the Pondakhol range were demarcated at the request of the Survey department (the matter of excluding these areas from extension of cultivation by closing them as grazing porambokes being left to be decided by the Settlement Officer) and cutting in heaps and burning the unsaleable wood and refuse on fire lines was not carried out as the condition of the lines was good.

*Vizagapatam.*—The construction of the bridle path from Kondasantha to Tadarparti was not taken up till after the close of the year.

*Gōdāvari, Lower.*—Three wells and a combined subordinates' quarters and the bunding up of a stream for storing water were given up, funds being needed for more urgent works.

*Kistna.*—Repairs to a range quarters were not done, the building having collapsed during the heavy rains; rectification of the boundary lines of two reserves was not done as the surveyor was engaged otherwise; mada seeds were not sown in the Kanur reserve—the reason given "owing to floods and rains" is not convincing as neither floods nor rain would have done the seed or seedlings any harm; fencing and sowing of babul seeds in 24 acres of Nachugunta reserve were not done for want of seeds; compensation for the site for the Range office at Kondapalli was not paid, the site not having been finally selected. It was found unnecessary to deepen the Malakalanka canal during this year

*Kurnool, East.*—The proposed collection of timber from fire lines was given up as the lines were not approved; fuel was collected in place of freeing natural seedlings under improvement and the construction of three bridle paths and a cart-track and repairs to a few cart-tracks and subordinates' quarters and sheds were not undertaken for want of funds.

*Kurnool, South.*—Certain roads and buildings were postponed on the ground of war economy.

*Kurnool, West.*—Improvements to a spring in the Nallamalais in one locality were given up in favour of one in another locality and the bunding operations in a range were abandoned as other work was found for the Chenchus.

27. The sanctioned annual plans of operations could not be strictly adhered to on account of curtailment of expenditure due to war. *Central Circle.*

28. The chief deviations in the annual plan of operations were the postponement of certain roads and buildings due partly to the financial situation and partly to the difficulty of obtaining labour. Buildings which are much needed in the Javadi hills of South and West Vellore had unfortunately to be postponed for want of labour. In Trichinopoly, the building of sandalwood godowns which are an immediate necessity was given preference over other works laid down in the plan of operations. *Southern Circle.*

29. Owing to financial stress there were numerous deviations from the sanctioned plans. The chief of them, besides those mentioned in paragraph 24 supra were: *Mangalore North.*—The extension of Chittoor road was not taken up as it was not required. Inspection bungalow at Kerveshe was given up in favour of urgent works. The stone-lining of some of the reserves was postponed pending verification of boundaries. *Mangalore South.*—Repairs to certain roads were not carried out. Deputy Ranger's quarters at Sullia and guards' sheds in three places were not constructed for want of funds. Demarcation of two reserves was not carried out owing to discrepancies in the boundary descriptions. *North Malabar.*—Naikal road was not commenced. Subordinates' quarters at four places and demarcation of certain reserves were not undertaken for want of funds. *South Malabar.*—Two cart roads, three bridle paths and the Deputy Ranger's quarters at Nellikutta were deferred for want of funds. The river training works were not carried out pending investigation by the Public Works department. The demarcation of Silent valley reserve was postponed for want of labour. Two roads (Nellikutta-Palat and Kunhirakadavu-Pulimunda) and a tanna at Mundayanthodumukku which were not provided for in the plan of operations were constructed. The *Nilgiris.*—A road along the Nilgiri-Mysore boundary, a store room at Kargudi and range quarters at Segur were deferred for want of funds. The College main road in Coonoor range was postponed owing to delay in the acquisition of land. *Kollegal.*—Construction of subordinates' quarters at Mattipuram and Ponnachi and rest-house at Cowdalli, demarcation of Chikkailur and Edayarhalli reserves and of enclosures in Madeswaranmalai were postponed for want of funds. *North Coimbatore.*—Coupe X of Burgur sandalwood working circle was not exploited as there was no sandal growth. Tamarakarai-Sengolam and Hassanur-Hulikarai roads were not continued pending orders as to their necessity. Rest-houses at Kempanaikanpalayam, Chennampatti and Ullurthanda, demarcation of North Burgur reserve and the improvement of water-supply in some of the reserves were put off partly for want of funds and partly on account of the heavy programme of works. *Western Circle.*

*Central Coimbatore.*—Improvement fellings in Tadagam and Mettupalayam forests were not carried out as the working plans were not sanctioned in time. Dead timber from the Elival forests was not extracted for want of establishment. Some of the fuel and bamboo coupes prescribed for the year were not exploited either for want of demand or because the felling in previous year's coupes was in arrears. Several of the road and building works were given up for want of establishment and funds. *South Coimbatore.*—The felling in Tekadi leased forests was stopped owing to the large stock of timber awaiting transport from the forests. Continuation of the Varigali valley road was pending further investigation. Inspection bungalows in Punachi working circle and at Ulandi and subordinates' quarters at six different places were put off for want of funds. Some road and building works were given up in favour of more urgent works.

*Northern Circle.*

## 2. Communications and Buildings.

30. The total expenditure on new works amounted to Rs. 24,433 and on repairs Rs. 35,911 as compared with Rs. 28,611 and Rs. 83,033 respectively in the previous year. The decrease is due to greater economy observed on account of war, only absolutely essential works being carried out.

### (*a*) *Roads and bridges.*

The important works of a permanent nature executed during the year were :—

*Ganjām.*—Construction of 1 mile 4 furlongs of road in the Pondakhol Range ; a third bridge across the Odangi Nalla and a bridge costing Rs. 5,650 across the Rushikulya river at Pippalaponka. *Kistna.*—The Yerrakuruva Hill road was completed and the road from Yegaram on the local fund road to Ramasingavaram Reserve was begun. *Kurnool East.*—Cart-tracks from district boundary line to Tummalabailu, and from Yetambhavi to Ustalapaya and completion of cart-track from Chintala to Tummalabailu, bridle paths to Garnapenta, from Nekkanti to Morricheruvu, from Chilakacherla to Bommalingam via Nootibhavi, foot-path from Narthadikala to Nekkanti and about 35 miles of foot-paths along fire lines. A suspension bridge made of the fibre of *Bauhinia Vahlii* over Odangi Nalla which is likely to last for two seasons was constructed in *Ganjām*. A sum of Rs. 5,000 was contributed from each of the *East* and *South* divisions of *Kurnool* towards the upkeep of the Nallamalai Ghat roads under the control of Local Board.

*Central Circle.*

31. The outlay on communications and buildings is shown below :—

| | 1915-16. | 1916-17. |
|---|---|---|
| | Rs. | Rs. |
| Roads and bridges ... ... ... ... ... | 13,181 | 13,214 |
| Buildings ... ... ... ... ... ... | 22,461 | 17,183 |
| Other works ... ... ... ... ... ... | 866 | 812 |
| Total ... | 36,508 | 31,209 |

The decrease in expenditure under the last two heads is due to the postponement of works on account of the war.

### (*a*) *Roads and bridges.*

32. The chief works are.—In *North Cuddapah*, Nilapuram-Dasaripalle road was completed and the Nallamalais, Narasimhabhavi and Kothabhavi roads were in progress. In *South Cuddapah*, conversion of Vathalur-Thummalabylu cart-track into a road, formation of roads from Kodivengammabhavi to Kodur and from the foot of the hill to the bungalow site at Kodivengammabhavi were completed while the construction of Balapalle-Mogilipenta road, formation of a cart-track from Arimanipenta to Bodeddulabhavi and the construction of a cart-track to join Kodur range boundary were in progress. In *West Cuddapah*, the construction of Guvvalacheruvu-Korthimadugu road, Ganganapalle extension-Polathala road and conversion of Palakonda Sandramanipenta and Kondagorlapenta-Bhakarapet bridle paths into cart-tracks were in progress. In *Nellore*, construction of bridle traces in the hills and the conversion of compartment and boundary lines into inspection paths were carried out. In *Chingleput*, construction of a culvert in Guindy Park reserve and the laying out of

two branch roads in Ambakkam reserved forest were completed. In *Chittoor*, the road trace of Nagapatla-Bhakarapet and Pulibone-Chamala road was completed and these road works as well as the bridle-path through coupe IX of Kalroddipalle working circle and the repair to Mamandur-Puliutla road were in progress.

*Tramways.*—Temporary tramway lines were laid for the transport of fuel and poles from the casuarina coupes to the Buckingham canal and from Sriharikota reserve to the canal. The use of the lines and tracks is granted to the contractors on hire. Three thousand seven hundred and sixty-five tons were transported over the Sriharikota tram line and 1,045 tons over the Nellore line as against 1,518 and 927, respectively, in the previous year.

(*a*) *Roads and bridges.*

33. The total expenditure on new works amounted to Rs. 56,240 and on repairs to Rs. 16,184 as compared with Rs. 5,371 and Rs. 14,997 in the previous year. The increase was due to the expenditure incurred by the Forest Engineer on road works having been met from Forest funds. *Southern Circle.*

The most important work of the Forest Engineer was the construction of the Alangayam-Komattiyur Ghat road. The first section of five miles was completed and work on the other two sections well advanced. Rupees 47,457 were spent out of a total estimate of Rs. 1,11,400.

In addition, the alignment of the Nadanur-Amerdi road was selected and passed by the Superintending Engineer and the Conservator.

The chief new works done during the year were the construction—

in *North Vellore* of (1) Pinnathurai-Amerdi road two miles at a cost of Rs. 774.

(2) Thottalam-Naickaneri road one mile and two furlongs at the cost of Rs. 647.

(3) Charagal-Naickaneri road one mile and one furlong at a cost of Rs. 832.

*in South Salem* of the Varagur-Namagiripet road one mile and two furlongs at a cost of Rs. 263.

in *Trichinopoly* of the Pillayarnatham-Kalpatti road two miles at a cost of Rs. 521.

A large amount of work was done in repair and improvement work more especially in—

(1) *Madura.*—One hundred and nineteen miles of roads at a cost of Rs. 5,316.

(2) *Tinnevelly.*—Rupees 4,895 spent chiefly on improvement to the Papanasam Ghat road.

(3) *North Salem.*—Ninety miles at a cost of Rs. 2,529.

(4) *South Salem.*—Forty-three miles of roads and bridle-paths at a cost of Rs. 1,009.

(5) *Trichinopoly.*—Ninety-nine miles chiefly bridle-paths at a cost of Rs. 1,689.

(*a*) *Roads and bridges.*

34. The amount spent under this head was Rs. 44,459 against Rs. 42,850 in the previous year; of the former, a sum of Rs. 19,880 was spent on new works and the balance on repairs against Rs. 17,175 and Rs. 25,675, respectively, in 1915-16. Fifty-one and a half miles of new cart roads, bridle-paths, etc., were added and 383½ miles were repaired during the year. Important new works of the year: *Mangalore North.*—About six miles of roads for extraction of fuel and timber. *Mangalore South.*—The length of new works is given as 8⅞ miles, while the cost incurred was small, i.e., Rs. 136. This has not been explained. Presumably temporary roads were made for carting fuel. *South Malabar.*—Seven and a quarter miles of cart-tracks and nine miles of bridle-paths. The *Nilgiris.*—The completion of Mudumalai-Thorapalli road and the roads in Bleakhouse and Coonoor Peak reserved forests and the commencement of bridges on the Mudumalai-Thorapalli road, a bridle-path between blocks II and III of Mudumalai working circle and a road in block II of Snowdon working circle. *Kollegal.*—The construction of two miles of bridle-path were constructed. *North Coimbatore.*—The construction of two and a half miles of ghat road. *South Coimbatore.*—The extension of tram line and the construction and improvement of bridges. *Western Circle.*

35. *Tramways.*—The tramway in Tekadi leased forests was extended by ten furlongs. Traction was done mostly by Government bullocks and buffaloes. The working of the year showed a net profit of Rs. 11,192 against Rs. 1,441 in the previous year; the profit was the highest on record. The outturn of work during the year increased from 3,691 to 11,434 ton-miles and the working charges decreased by 50 per cent which was due to larger quantity of timber trammed during the year. The credit for this improvement is due to the energy and resource displayed by the District Forest Officer.

36. *The work of the Forest Engineer.*—The Forest Engineer completed the field work of the Tekadi tramway trace, the estimates and plans for which await the decision of the Forest Commissioner, whether bullock or mechanical power is to be adopted for working the system. Provisional estimates for each have been prepared by the Forest Engineer and the District Forest Officer respectively. The trace has been inspected under Government orders by the Superintending Engineer, Public Works Department, IV Circle, and it is understood is approved, but no intimation to that effect has been received. He revised also the estimates and plans for the New Mount Stuart ghat road and the estimates are pending with Government.

(*b*) *Buildings.*

*Northern Circle.*

37. The following permanent buildings were under construction :—

*Ganjām.*—Quarters for the Rusellkonda Range officer, *Kurnool South*, Range office buildings and quarters for the Ranger at Racherla, rest and out-houses at Utla and at Aliabad, *Kurnool West*, inspection bungalow at Praema for the combined use of Forest and Fisheries department.

The following were completed during the year :—

*Gōdāvari Upper.*—Range shed with out-houses at Somanamalla, *Gōdāvari Lower*, rest-house at Veerabhadrapuram, subordinates' quarters at Urrinka, *Kurnool East*, inspection shed at Guttalcheruvu and two others with out-houses at Iswarakuppam and Narthadikala, Deputy Rangers' quarters with shop at Nekkanti, *Kurnool South*, quarters for Range clerk and peons at Iskagundam, rest and out-houses at Iskagundam, *Kurnool West*, cattle pound at Pechervu.

A tanna shed at Bamsolundi in *Ganjām* and three sheds in *Kurnool South*, one at Bandlagedda for housing the tannadar, one at Sandrapodu for providing shelter for the students of the Vernacular Training School and a third at Utla for the patrol staff were the temporary structures constructed during the year.

*Central Circle.*

38. The important new works of the year are :—In *Guntūr*, the construction of an inspection shed at Mutukur was in progress. In *North Cuddapah*, inspection sheds at Jothi and Mallapalle, and combined range office and quarters at Porumamilla were completed while the combined range office and quarters at Vonipenta was in progress. In *South Cuddapah*, construction of a rest-house and out-houses at Kodivengammabhavi and of subordinates' quarters at Papanasam and Rachapalle were in progress. In *West Cuddapah*, construction of out-houses to Veeraballi rest-house and of Gudibylu and Mangalabylu patrol sheds were completed while the construction of rest-houses at Gadikota and Polathala, combined range office and quarters and subordinates' quarters at Sanipaya were in progress. In *Nellore*, inspection shed at Vedullacheruvu and a wall around the compound of the range office and quarters at Dachur were completed, while the construction of out-houses to Gonupalli rest-house, inspection shed at Nakkamuthi and Forest guards' quarters at Mavalam were in progress. In *Chingleput*, construction of out-houses to Kambakkam hill bungalow and tiling the out-house to Nagalapuram rest-house were in progress. In *Chittoor*, construction of quarters to forester at Mamandur, stables to Panapakkam rest-house and preparation of a site for a rest-house in Bommasamudram A reserved forest were in progress.

*Southern Circle.*

39. During the year the total expenditure on new buildings and on repairs amounted to Rs. 21,240 and Rs. 10,321 respectively against Rs. 23,075 and Rs. 15,005 in the previous year.

*North Vellore.*—Construction of subordinates' quarters at Charagal and Rangampet and part construction of rest-house at Thongamalai and out-houses at Amerdi.

*South Vellore.*—Completion of the range office building at Santavasal and of the sandalwood chipping shed at Vellore and part construction of subordinates' quarters at Burgur and Thongamalai.

*West Vellore.*—Construction of a new range office at Tirupattur and part construction of rest-house and outhouses at Pudur and Kuttathur and subordinates' quarters at Kuttathur. In addition a rest-house at Kavalur was nearly completed by the Forest Engineer.

*North Salem.*—The range officer's quarters at Danishpet and Mecheri were completed. At Dharmapuri a new range office and a sandalwood godown were nearing completion. Progress was also made on the range office at Mecheri and on sandalwood godowns at Aiyur, Jowlagiri and Anchetti. Several inspection sheds were also completed.

*South Salem.*—A sandalwood godown at Harur was completed and some progress made on the ranger's quarters and range office at Kottapatti. A rest-house with outhouses at Mayambadi, the centre of the Pachamalai hills, was begun.

*Trichinopoly.*—Completion of the subordinates' quarters at Puliansholai. In addition, progress was made in the construction of sandalwood godowns at Namakkal, Valappur, Sobanapuram and Pudur.

*Tinnevelly.*—Completion of subordinates' quarters at Nambi Ar.

*Western Circle.*

40. The expenditure on new buildings amounted to Rs. 20,448 and on repairs and maintenance to Rs. 8,445 ; the figures for the previous year were Rs. 32,899 and Rs. 11,896 respectively. The expenditure during the year was much curtailed owing to the war. The principal new works of the year were — *Mangalore North.*— — The completion of the range quarters at Karkal and the inspection shed at Naravi. *Mangalore South.*— The completion of the inspection bungalows at Kolchar and Kollamogar and the commencement of deputy ranger's quarters at the latter place. The inspection bungalow at Bandihalla was nearing completion. *North Malabar.*— The Range quarters at Manantoddy and the Range office at Kanoth were completed. *South Malabar.*— The Range quarters at Nedungayam was in progress. Guard's quarters at Edacode and Arimbrakutha and the tanna at Mundayanthodumukku were constructed. The *Nilgiris.*— A rest-house at Doddakatti and subordinates' lines at Kargudi. *Kollegal.*— Subordinates' quarters at Gundal and out-houses at Ponnachi. *North Coimbatore.*— The completion of the rest-house at Jeergahalli and four sets of subordinates' lines. The rest-house at Koilnattam was in progress. *Central Coimbatore.*— Rest-house at Chindaki was completed and that at Kunjapanai continued ; subordinates' quarters at Attapadi neared completion.

### (*c*) *Miscellaneous works.*

*Northern Circle.*

41. The chief works carried out were the repairs of tanks, sinking of new and repairs to old wells, clearing of springs and digging and widening channels ; bunding of various streams in the Nallamalais of *Kurnool East* and *West* districts was undertaken to provide work for Chenchus.

*Central Circle.*

42. The chief works were the repair of wells and water-sources.

In *North Cuddapah*, sinking of a well in Porumamilla range office compound, in *South Cuddapah*, digging a trial well at Kodivengammabhavi were in progress. In *West Cuddapah*, sinking a well in the compound of Veeraballi rest-house was completed. In *Nellore*, Rs. 467 were spent on the construction of wells and Rs. 565 on the repairs and improvements of ponds to supply water for cattle in kancha grazing areas. In *Chingleput*, removing silt from the wells in the compounds of rest-houses, cleaning and levelling the ground in the compound of Kambakkam Hill bungalow and lockspitting and fencing the compounds of rest-houses at Sathiavedu and Allikuli and of Enathivet shed were done. In *Chittoor*, sinking of a well at Parakalatippa in Mamandur was in progress.

*Southern Circle.*

43. Nine new wells were sunk and existing wells were repaired or deepened. The principal work under this head was the attempt to improve the water-supply in the Javadis by means of tube wells. This work was chiefly in the hands of the Agricultural Engineering Department and unfortunately small progress was made as the department found it so difficult to keep their subordinates on the hills through fear of fever. Shafts were however sunk at Komattiyeri, Mandaparai and Nadanur.

*Western Circle.*

44. The total expenditure was Rs. 2,041 against Rs. 4,464 in the previous year. The chief works carried out were the sinking of two wells in *Mangalore North* and two in *North Coimbatore* which were in progress, the improvement of water-supply to the forest camp at Kargudi in the *Nilgiris*, the training of the Paishwani river in *Mangalore South* and the construction of a timber boom in *South Malabar*.

*Telephone.*—The telephone service in *South Coimbatore* was in use, but it is reported that the line was not always properly maintained by the line-man employed by the Telegraph department.

### 3. Protection of Forests.

#### (*a*) *General protection.*

*Northern Circle.*

45. The following statement shows the number and classification of Forest offences brought to light during the year :—

| Cases. | Injury by fire. | | Unauthorized fellings. | | Unauthorized grazing. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16 | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| Cases taken into court .. | 10 | 5 | 471 | 360 | 148 | 135 | 52 | 36 | 681 | 536 |
| Cases compounded .. | 10 | 5 | 1,977 | 2,016 | 612 | 459 | 132 | 159 | 2,731 | 2,639 |
| Cases undetected .. | 216 | 148 | 206 | 169 | 21 | 12 | .. | 3 | 443 | 332 |
| Total .. | 236 | 158 | 2,654 | 2,545 | 781 | 606 | 184 | 198 | 3,855 | 3,507 |

The number of cases reported was less than in the previous year under all the heads except under " other offences " the decrease being ascribed to better supervision under the patrol system. In *Kurnool East* orders were passed by the Collector to introduce the system recommended by the Forest Committee and approved by Government of letting off all offenders who were caught grazing their cattle or goats illicitly in any of the reserves placed in class V without any further punishment beyond impounding the cattle.

46. There were 446 cases pending at the beginning and 494 at the end of the year ; of these latter 101 were with Magistrates. Out of the cases brought to trial during the year 549 ended in conviction and 75 in acquittal against 722 and 64 respectively in the previous year, the percentage of failure being 12·02 against 8·14 in the previous year. The increase in the percentage of failure was chiefly in *Kistna* due to weakness of evidence generally and to the acquittal of all cases in unreserved lands, while the fall in *Ganjām* was due to the careful supervision exercised by the Extra Assistant Conservator and in *Kurnool West* the decrease in acquittals is ascribed to the patrol system of protection.

The inadequate punishments awarded in grazing offences by the Subordinate Magistrate in *Kistna* were brought to the notice of higher authority.

47. *Closure of forests to grazing for not reporting or preventing illicit grazing or other offences on a large scale.*—The grazing area adjoining Papienipalle village in *Kurnool East* was closed for six months as a punishment to the villagers for not rendering assistance in putting out fires caused in the Cumbum Range and this seemed to have had the desired effect. Certain villagers of *Kurnool West* were warned of the suspension of the concession of free removal of grass from the Nallamalais and the Yerramalais on account of failure to render assistance in extinguishing fires during the year. In *Kurnool South* a very serious outbreak of fires in Sirvel range is put down to incendiarism ; it is not clear that any action is being taken.

48. Two thousand two hundred and seventy-seven cases were compounded for Rs. 22,286 against 2,410 cases for Rs. 25,416 in the previous year. There were fewer cases and of a less serious nature than those of the previous year.

49. A few rewards were given for assistance in the detection of forest offences and for co-operation in protecting the forests from fire. The Khonds in *Ganjām* were rewarded with rice and bulls for cultivation and in *Gōdāvari Upper* the Koyas and Reddis were given money rewards personally distributed by the District Forest Officer.

50. The following statement shows the number and classification of forest offences compared with the previous year :— *Central Circle.*

| Class. | Injury to forests by fire. | | Unauthorised felling. | | Unauthorized grazing. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| 1. Cases taken into court. | 20 | 7 | 1,082 | 1,235 | 1,086 | 868 | 98 | 84 | 2,286 | 2,194 |
| 2. Cases compounded .. | 5 | 9 | 3,813 | 3,691 | 2,837 | 2,637 | 149 | 185 | 6,804 | 6,522 |
| 3. Cases undetected .. | 307 | 328 | 153 | 97 | 423 | 226 | 1 | 8 | 884 | 659 |
| Total | 332 | 344 | 5,048 | 5,023 | 4,346 | 3,731 | 248 | 277 | 9,974 | 9,375 |

There was decrease under felling and grazing and a slight increase in injury to forests by fire and other offences.

The decrease under felling and grazing is due—(1) to formation of panchayats, (2) to efficient patrol of the special patrols entertained and greater number of cattle having been licensed, and (3) to extension of kancha system and to non-cognizance of petty cases in kancha areas which were left to kanchadars to deal with.

Of the 2,444 cases taken into court, 2,263 were convicted and 181 acquitted and the percentage of failure fell from 10 per cent of last year to 7·4 per cent during the year.

Six thousand one hundred and twenty-four cases were compounded for Rs. 65,203 against 6,657 cases for Rs. 76,943 in the previous year.

Rupees 2,704 were realized by fines imposed on kanchadars for breaches of kancha rules.

The punishments awarded by the magistrates are in many cases inadequate especially in *Chittoor*.

51. Rewards were granted in *Anantapur*, *North* and *West Cuddapah*, *Chingleput* and *Chittoor*, to an amount of Rs. 313 for successful detection of forest offences the chief of which are—

In *Anantapur*, Rs. 35 were awarded in a case of illicit browsing in which the accused were fined Rs. 560 and Rs. 33 in a case in which two influential men were fined Rs. 100 each. In *West Cuddapah*, Rs. 36 were awarded in a case of wilful incendiarism in which the accused was sentenced to six months' rigorous imprisonment and to pay a fine of Rs. 50 to the department as compensation.

52. *The rules for the guidance of Forest Officers in compounding Forest offences* in G.O. No. 1990, dated 13th June 1910, and the rules prohibiting District Forest Officers passing orders to confiscate the seized property when compounding an offence were generally observed.

53. The following statement shows the number of offences of the year compared with the previous year :— *Southern Circle.*

| Cases. | Injury to forests by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| Cases taken into court .. | 21 | 7 | 3,070 | 2,405 | 676 | 497 | 105 | 83 | 3,872 | 2,992 |
| Cases compounded .. | 4 | 3 | 6,912 | 6,059 | 1,702 | 1,653 | 213 | 162 | 8,831 | 7,877 |
| Cases undetected .. | 630 | 439 | 120 | 113 | 43 | 9 | .. | 1 | 793 | 562 |
| Total . | 655 | 449 | 10,102 | 8,577 | 2,421 | 2,159 | 318 | 246 | 13,496 | 11,431 |

The total number of cases in reserves has decreased by 1,698 and in unreserves by 367. This decrease occurs in every kind of offence and is found in every district and may be attributed to the policy which is now being pursued.

Out of 11,431 cases, no less than 3,338 refer to unreserves and out of 8,577 cases of unauthorized felling, 5,310 relate to reserves and 3,267 to unreserves. The decrease in unreserved cases is partly due to figures for offences committed in Usilampatti division unreserves of Madura district not having been included on account of the non-receipt of figures from the Revenue Divisional Officer.

*Cases brought to trial.*

| Year. | Convictions. | Acquittals. | Percentage of failure. |
|---|---|---|---|
| 1915-16 .. .. .. .. .. | 3,948 | 210 | 5·05 |
| 1916-17 .. .. .. .. .. | 3,651 | 146 | 3·84 |

In *North* and *South Vellore* (including *West Vellore*) there was a substantial decrease in the number of cases brought to trial.

*Cases compounded.*

| Year. | Number of cases. | Amount. |
|---|---|---|
| | | RS. |
| 1915-16 ... ... ... ... ... ... ... | 7,898 | 56,054 |
| 1916-17 ... ... ... ... ... ... ... | 6,827 | 57,607 |

In fixing the amount of compensation attention was generally paid to the orders contained in G.O. No. 1990, dated 13th June 1910. Somewhat heavier compounding fees were levied for offences in specially protected blocks in *North Vellore* and *South Salem* and for cases of goat browsing and for organised illicit fellings in *South Arcot*.

In West Vellore, an important case of theft of sandalwood from the Javadi forests was successfully prosecuted and the accused concerned was sentenced under the Penal Code to undergo simple imprisonment for one year (in consideration of his age) and under the Transit Rules to pay a fine of Rs. 150. The conviction and sentence were upheld on appeal.

In South Arcot, an important case of sandalwood smuggling from South Salem forests by the Kalroyen Jaghir contractors of South Arcot district was detected and four tons of sandalwood were seized. The case is under investigation.

In South Salem, three cases of sandalwood thefts ended in conviction. The subordinates of Harur Range (from Ranger down to watchers 15 in number) were severely assaulted by the villagers of Marudipatti in connection with the detection of a case of illicit grazing of one hundred goats. Five of the accused were sentenced by the Subdivisional Magistrate to undergo 15 months' rigorous imprisonment and 17 nine months' rigorous imprisonment each.

54. *Rewards.*— Small rewards were given in Madura, Trichinopoly, North Salem and West Vellore, but on the whole the power of granting rewards was used sparingly.

*Western Circle.*

55. The offences reported during the year are compared with those of the previous year and with the average of the three years ending with 1915–16 in the following statement:—

| Class. | Injury to forest by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total cases. | | Average for three years ending 1915-1916. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17 | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | |
| Cases taken into court. | 41 | 31 | 410 | 275 | 142 | 96 | 86 | 93 | 679 | 495 | 647 |
| Cases compounded. | 25 | 69 | 1,699 | 2,016 | 483 | 564 | 167 | 275 | 2,374 | 2,924 | 2,490 |
| Cases undetected. | 456 | 302 | 25 | 40 | 18 | 10 | 8 | 3 | 507 | 355 | 347 |
| Total .. | 522 | 402 | 2,134 | 2,331 | 643 | 670 | 261 | 371 | 3,560 | 3,774 | 3,484 |

NOTE.—The offences of 1915–16 in the unreserved lands of Central Coimbatore are included in the above.

The total number of offences reported increased by about 6 per cent over those of the previous year and 8·3 per cent over the average of the three preceding years. Compared with the figures of the previous year, there was a decrease of 23 per cent under 'Injury by fire' and an increase under the other heads. The decrease under 'Injury by fire' was due to a general fall in the number of fire occurrences and occurred chiefly in *North Coimbatore* due to a better season and perhaps also to the punitive measures taken for incendiarism in the previous year followed by the warning of quadrupling grazing fees for its continuance, in *Central Coimbatore* to better season and in *South Coimbatore* to better protection. The increase under 'Unauthorized felling' and 'Other offences' was due chiefly to the inclusion of offences in unreserved lands in *Central Coimbatore*, whilst that under 'unauthorized grazing' occurred chiefly in *Mangalore North* as well as in *North Coimbatore* where owing to the doubling of fees referred to above there was a temptation to slip in unlicensed cattle along with the others. The District Forest Officer explains that the figures are misleading, as though the number of cases increased, that of the cattle involved was less by about 20 per cent.

The number of offences prosecuted during the year was 495 and there were 214 pending from previous year. Out of the total of 709 cases, 579 were disposed of and 130 remained pending. The 579 disposed of cases resulted in 526 convictions, 47 acquittals and six withdrawals; the percentage of conviction was 92 against 90 in the previous year. The number of cases withdrawn after being taken to court decreased from fourteen to six. The punishments inflicted by the Magistrates were generally satisfactory.

Thefts of sandalwood by organized gangs from unreserved lands in *Mangalore North* continue. The position here is not improving and the Forest Commissioner has lately intimated his intention of holding a local inquiry. Thefts of manure from grazing grounds on the plateau in *The Nilgiris* are reported to have been a source of considerable trouble and complaint and are not easy of detection. Magistrates are reported to take a lenient view of such offences. If this means the removal of cattle droppings, I do not think it should be treated as an offence, and it would do no practical harm if no notice was taken of it. *South Coimbatore*—Timber thefts from the forests adjoining Malayandipatnam village are reported to be rife. In one case two accused were fined Rs. 50 each.

*Compounded offences.*—The number of cases compounded and the amount of fees realized were 2,673 and Rs. 31,272, respectively, against 2,341 and Rs. 24,400 in the previous year. The figures of the year include those of 1915–16 relating to unreserved lands in *Central Coimbatore*. The increase is partly due to the increase in the number of offences compounded and partly to heavier fees levied especially in *North Coimbatore* owing to the raising of grazing fees. The rules for compounding grazing offences were observed generally.

*Undetected offences.*—The number of undetected cases compared with those of the previous year decreased by 30 per cent. Eighty-five per cent of such cases was under 'Injury by fire.' All fire occurrences except those caused in fire-tracing were treated as offences.

*Holding adjacent villagers responsible for commission of offences in particular forests.*—The notifications of warning to villagers on the subject were as usual published in *Mangalore North* and in *Coimbatores*. Owing to the occurrence of a large number of fires in the Moyar valley in *North Coimbatore*, the penning of cattle within a prescribed area was prohibited. The system is not workable in *The Nilgiris* and not required in *Malabar* where the number of offences is very small. No action was taken in *Mangalore South*.

56. *Rewards—Mangalore North.*—A sum of Rs. 68 was granted as rewards for successful detection of sandalwood thefts. A forest guard in *Mangalore South* was rewarded Rs. 4 for detecting the theft of a teak tree in Yenmur reserve. *South Malabar*—Rs. 10 were granted to a tannadar, a watcher and two others who secured a timber raft containing a big log illicitly removed. *The Nilgiris*—A reward of Rs. 5 was given to subordinates who detected a grazing case. The Game Association paid Rs. 30 to forest subordinates for detecting cases of poaching. *North Coimbatore*—Rs. 21 were given to five subordinates in two cases of illicit removal of timber. One Salt Sub-Inspector was given a free grant of twelve pounds of sandalwood for having detected a case of sandalwood theft.

(*b*) *Protection from fire.*

*Northern Circle.*

57. The areas attempted and protected are given in Form 72. The system of fire protection was the same as in previous years except in *Ganjām* and *Kurnool East* where the entire width of the fire lines was cleared and burnt and the system of having boundary and fire lines cut and cleared by purchasers of the growth thereon as in *Kurnool South* was adopted in *Kurnool West* where feasible, but the practice of providing employment for the Chenchus on forest works under departmental supervision forbids this in the majority of cases.

Fire protection works were undertaken much earlier on account of stringent orders issued by my predecessor. The percentage protected from fire in the years 1915–16 and 1916–17 has been as follows:—

| | 1915–16. | 1916–17. |
|---|---|---|
| Ganjām ... ... ... ... ... ... | 92·98 | 99·77 |
| Vizagapatam ... ... ... ... ... | 97·23 | 99·98 |
| Gōdāvari, Lower ... ... ... ... ... | 96·81 | 99·88 |
| Do. Upper ... ... ... ... ... | 74·87 | 94·91 |
| Kistna ... ... ... ... ... ... | 93·79 | 99·83 |
| Kurnool East ... ... ... ... .... | 84·24 | 88·23 |
| Do. South ... ... ... ... ... | 79·52 | 81·49 |
| Do. West ... ... ... ... ... | 84·81 | 90·71 |
| Average for the Northern Circle ... | 88·03 | 94·35 |

The season was very favourable, but the results are due also in large measure to a lot of very strenuous work on the part of all officers and are very creditable.

58. *General.*—A sum of Rs. 54,461 was spent during the year on fire protection against Rs. 57,442 spent in the previous year. The area dealt with was almost the same as in the previous year. In the whole circle 4,225 square miles were successfully protected against 3,927 square miles in the previous year and the proportion of failure fell from 14·77 to 8·32; the cost per square mile successfully protected also fell from Rs. 14–10–0 to Rs. 12–14–2; the fall is due chiefly to the earlier rains.

Appendix A shows the number and origin of fires.

*Central Circle.*

59. There was no change in the system of fire protection. The area of forest tracts protected is shown in Form No. 72.

The area attempted to be protected during the year was 2,218 square miles against 2,221 square miles of last year and the area burnt was 574 square miles against 349 square miles in the previous year.

In *Bellary*, the sandalwood areas in Ramandrug block of the old Sandur range and all the felled coupes and plantations of the old Adōni range were fire-traced as usual. In Bandri reserve there were three large fires which burnt an area of 4,780 acres, in Dharmapuri two fires to the extent of 550 acres and in Ramandrug one fire of 300 acres. In *Anantapur*, fires were very heavy in the Bukkapatnam and Kadiri ranges and as a punitive measure for the failure of the adjoining villages to assist in extinguishing fires, the closure of eight reserves both to grazing and free removal of grass was recommended after the close of the year and since approved by the Board. Protection from fire is reported to be far from successful. In *Guntūr*, no area was under special protection during the year. One large fire occurred in Gangalakunta reserve and burnt an area of 5,060 acres. In *North Cuddapah*, there was increased wilful incendiarism and the villagers concerned were punished with enhancement of grazing fees to four times the ordinary rate and withdrawal of the privilege of free removal of grass. In *South Cuddapah*, the increase in the area burnt was chiefly due to the prolonged severe drought with high winds and thick growth of grass. In *West Cuddapah*, the increase was due to very early commencement of fire season before the fire protection operations were completed and to wilful incendiarism on the part of some of the villages adjoining Palakondas and Seshachellams. In *Nellore*, along the foot of the Udayagiri Veligondas the villagers failed to help in putting out fires and as a punishment Veligonda B block was closed for the free removal of grass. In *Chittoor*, there were extensive fires in Horsleykonda, Tsadukonda, Airala, Vovilthota and Mordana reserves and adequate help was not rendered by the villages, and enhancement of grazing fees for the season of 1917–18 has been recommended and since approved by the Board.

60. The origin of fires is given in Appendix A.

61. *Special protection.*—There was no change in the system of fire-protection during the year except in South and West Vellore where the reward system was greatly extended on the Javadis. The area attempted to be protected was 1,382 square miles against 1,157 square miles in the previous year. *Southern Circle.*

The area burnt during the year was 19·25 square miles against 90·40 square miles in the previous year and the percentage of area successfully protected during the year is 98·61 against 91·37 in the previous year. The cost per square mile of successfully protected area fell from Rs. 16–2–2 to 12–3–10. Last year, however, was exceptional in the matter of fires and the 19·.5 square miles is a slight increase on the 18·31 square miles burnt in 1914–15. The percentage of area successfully protected is very much the same.

62. *General protection.*—The percentage of failure fell from 2·96 to 1·23 during the year.

63. The number and origin of fires are given in Appendix A. There were 449 fires burning 34,072 acres against 697 fires burning 117,299 acres in the previous year and 258 burning 20,715 in 1914–15.

64. *Special protection.*—The usual system continued, viz., the clearing of exterior and interior fire lines and patrol by watchers. The area over which protection was attempted was 1,068 square miles against 1,127 in the previous year. The decrease was chiefly in *Kollegal*, *North* and *Central Coimbatore* due to transfers to general protection and to exclusion of areas which did not require systematic protection. The season was exceptionally dry in *South Kanara*. The percentage of successful protection was 98·3 against 89·3 in the previous year and 99·2 in 1914–15. There was a marked improvement in the *Nilgiris*, *North* and *Central Coimbatore* due to the more favourable season. In *North Coimbatore*, the patrolling watchers were paid partly on monthly wages and partly on the reward system. A sum of Rs. 350 was paid after the close of the year as rewards to *Sholagars* for successful fire-protection. In *South Coimbatore* the assistance of hill tribes was as in previous years enlisted and they were granted rewards on the results of protection. Rupees 110 were paid to them for the successful protection in the previous season. The cost per square mile successfully protected was Rs. 26–13–10 against Rs. 27–3–10 in the previous year. *Western Circle.*

65. *General protection.*—The area attempted to be protected was 2,556 against 2,498 square miles in the previous year. The percentage of failure fell from 16·1 to 2·4.

The number and origin of fires are given in Appendix A. The total number of fires was 455 against 563 in the previous year and the area burnt decreased by 85 per cent.

(*c*) *Protection from cattle.*

66. Out of 5,094 square miles of forests 1,291 square miles were closed to all animals throughout the year and nine square miles for part of the year as against 1,289 square miles for the whole year and eleven square miles for part of the year during 1915–16. As usual no goat-browsing was allowed in the reserved forests with the exception of a few admitted under rights admitted to the Chenchus at forest settlement in Kurnool East and West. *Northern Circle.*

Seventy-two per cent of the total area of reserved forests was opened to grazing of cattle, but closed against goats. The incidence of grazing in the several districts of the circle are given below :—

| Districts. | Number of cattle in cow units. | Area in acres. | Number of acres per cow unit. |
|---|---|---|---|
| | | ACS. | ACS. |
| Ganjam .. .. .. .. | 52,567 | 347,520 | 6·60 |
| Vizagapatam .. .. .. | 24,400 | 93,351 * | 3·82 |
| Godavari Upper .. .. | 40,528 | 277,413 | 6·84 |
| Do. Lower .. .. | 49,756 | 146,878 * | 2·95 |
| Kistna .. .. .. .. | 38,017 | 127,680 | 3·35 |
| Kurnool East .. .. .. | 100,461 | 438,784 | 4·36 |
| Do. South .. .. . | 44,844 | 134,754 | 3·00 |
| Do. West .. .. .. | 120,354 | 427,520 | 3·55 |
| Total .. | 470,927 | 1,993,900 | 4·23 |

* Accessible area dealt with.

The most intensive grazing goes on in certain reserves of the Sarvasidhi range in *Vizagapatam* where the grazing incidence is one cow for every 1·50 acres and the incidence here must be reduced. The incidence is also too high in the Yerramalais in *Kurnool West*. In both cases the matter is being looked into.

67. Appendix B shows the decrease in the number of cattle impounded compared with the average of the three years preceding; in *Kurnool South* this is said to be due to additional areas having been thrown open to grazing (in view of the fact that the grazing revenue shows a decrease of nearly Rs. 400 the explanation seems "weak"); and in *Gōdāvari Lower* to better understanding on the part of the public of the penalties for illicit grazing.

*Central Circle.*

68. The area closed and open to grazing is given in Form No. 73 revised in B.P. Forest No. 54, dated 8th May 1917.

The total number of animals grazed amounted to 1,021,881 which is less than the previous year.

The decrease is in *Bellary*, *Guntūr* and *Chittoor*, due to several reserves having been handed over to the management of panchayats.

In *Nellore*, the protection of kanchas on the whole is reported to have been good, although 62 kanchadars were fined a total of Rs. 2,704 for poor protection and transgressions against their agreements. The kancha grazing system is however making good progress in this district.

In five cases owing to persistent transgressions against agreements the kanchas were closed to grazing.

On the other hand 33 medals are to be awarded to selected kanchadars for good protection and rebates from 5 to 10 per cent on the kancha fees have been earned by 136 lessees. In all there were 369 kancha leases with an aggregate area open to grazing of 308,050 acres and 26,940 acres for protection.

*Semi-wild cattle.*—The acquisition of the enclosures in the Sriharikota reserve designed to get rid of the nuisance of the semi-wild cattle infesting it was in progress, but was ordered to be suspended pending the Forest Commissioner's personal enquiry. The Forest Commissioner visited the locality after the close of the year.

*Wild cattle.*—In the Ipur reserve in the Nellore taluk there is a herd (estimated at about 150) of wild and quite ownerless cattle. Many of these animals, the District Forest Officer states, are splendid specimens. There is prejudice or superstition in the vicinity against capturing and utilizing them. It is proposed to bring professional cattle catchers from Sriharikota and after capture to remove the captives and sell them elsewhere.

*Incidence of grazing.*—In *Bellary*, it is reported that steps have been taken to collect information regarding past incidence of grazing and the present condition and possibility of the reserves. Where it is found necessary to reduce the grazing incidence, this will have to be done by judiciously raising the fees. It is also reported that this policy was approved by the Forest Commissioner during his tour in the district in August. In *Anantapur*, it is reported that the incidence of grazing is one cow unit per 1·08 acres against 2·96 of last year. The grazing incidence is somewhat high but nothing can be done towards its reduction until the four sanctioned working-plans are revised and plans prepared for the other two ranges which have none at present and the Collector agrees with the above. In *Guntūr*, owing to the introduction of enhanced grazing fees last year the incidence of grazing has decreased to an appreciable extent, the incidence being during the year 3·48 acres as against 2·86 of 1915–16 and 1·80 acres of 1914–15. In *North Cuddapah*, average incidence of grazing is 6·59 acres per cow unit. In *South Cuddapah*, it is reported that the incidence is 1 cow unit per 7·20 acres and that it requires to be reduced by about half in order that the more easily accessible areas may not be overgrazed. In *West Cuddapah*, incidence of grazing is 5·5 acres per cow unit. In *Chingleput*, the incidence of grazing was one cow unit for 1·3 acres. This is a heavy incidence and steps were taken to introduce the kancha system of grazing into this district. In *Chittoor*, the incidence of grazing is generally heavy and the District Forest Officer reports that steps are being taken to limit the grazing to the actual possibility of the reserves in the new working plans under preparation.

69. An analysis of the cattle impounded is given in Appendix B.

70. Nearly 90·9 per cent of the total area of reserved forests and lands was opened to grazing of cattle but closed against goats. The incidence of grazing in the several districts of the circle is given below :— *Southern Circle.*

| District. | Number of cattle in cow unit. | Area in acres. | Number of acres per cow unit. |
|---|---|---|---|
| North Vellore .. .. .. | 95,381 | 272,870 | 2·86 |
| South do. .. .. .. | 86,292 | 226,436 | 2·62 |
| West do. .. .. .. | 73,824 | 196,673 | 2·66 |
| South Arcot .. .. .. | 106,761 | 178,560 | 1·67 |
| North Salem .. .. .. | 115,145 | 474,880 | 4·12 |
| South do. .. .. .. | 90,605 | 323,200 | 3·57 |
| Trichinopoly .. .. .. | 51,089 | 162,560 | 3·18 |
| Madura .. .. .. .. | 89,183 | 362,880 | 4·07 |
| Tinnevelly .. .. .. .. | 29,287 | 82,560 | 2·82 |
| Total .. | 737,567 | 2,280,619 | 3·09 |

The number of cattle grazed shows a reduction on last year, but there is no appreciable reduction in the incidence of grazing. Steps have however been taken in several districts to formulate grazing schemes which it is hoped will after a time reduce this very heavy incidence. An analysis of the cattle impounded during the year with the average of three years is given in Appendix B.

71. Goats were completely excluded from forests. Eighty-six per cent of the total area of reserved forests and lands was open to other animals for the whole year; thirteen per cent was closed throughout the year and one per cent for part of the year. There was an increase of 16 square miles in the area closed for the whole year in *Central Coimbatore* which is ascribed to the incorrect figures furnished in the last year's report. *Western Circle.*

*Incidence of grazing.*—The incidence of grazing does not exceed the possibility in *Mangalore South* and *North Malabar*. The forests of *South Malabar* are closed to grazing. In *Mangalore North*, the incidence in 24 out of 44 reserves is reported to be double what it ought to be and it is proposed to reduce over-grazing by a gradual increase of grazing fees. In the *Nilgiris* it is not possible to gauge precisely the incidence of grazing on account of numerous shola forests which contain no grazing and the steep ghat slopes which are not grazed on. In *Central* and *South Coimbatore* this question is being enquired into in accordance with the principles for introducing the forest village system. As the latter is extended in accordance with the Board's latest orders, the problem will be dealt with under the grazing provisions of the scheme.

*Introduction of the forest village system.*—There is no need to introduce the system in *Malabar* where the question of grazing is insignificant and in the *Nilgiris* which has its own peculiar conditions. Schemes for the forests of Mettupalayam range, Tadagam and Anaikattai blocks in *Central Coimbatore* and for the forests of Udumalpet range in *South Coimbatore* have been sanctioned during the year but too late for introduction in the current year.

The number of cattle impounded was 7,784 against 9,978 in the previous year and 9,033, the average for three years ending 1916–17. Compared with the figures of the previous year, there was a marked decrease in *Kollegal* due, it is said, to larger number of cattle being licensed; in *North Coimbatore* to a general decrease of illicit grazing and in *South Coimbatore* to better supervision. There was some increase in *Central Coimbatore.*

(*d*) *Protection against injuries from natural causes.*

72. *Ganjām.*—Sal leaves were attacked by the larvæ of *Ingura subapicalis*— family *noctuidæ* and two other species not yet identified, the effect of the attacks which ceases with the advent of the rains appears to be transitory. A borer *Hoplocarambyx spiniformis* a beetle attacked wood of standing over mature trees, the removal of which would doubtless be the cure. Several wild elephants in the Chendragiri reserve and in the neighbourhood of Pippalaponka damaged young sal and alarmed the forest employees but no one would wish to extirpate them. Sambhur and cheetal (spotted deer) seemed to have appreciated the young sal *Northern Circle.*

coppice in a sample area. Creepers were cut systematically and considerable improvement has been effected. *Vizagapatam.*—Coppice shoots were found to be eaten by sambhur which also did damage to the young trees by pealing off the bark. The larva of a longicorn beetle damaged a rubber tree by boring from the root to the branches through the stem and the tree was cut and removed root and branch. Men and porcupine scoop out and eat the tender shoot of bamboos and some sago palm were killed by hillmen by overtapping them for toddy. *Godavari Upper.*—Jassids did trifling damage to the leaves of the teak. *Kurnool West.*—Loranthus in the *Hardwickia binata* forests of the Yerramalais is a serious and increasing pest and lopping of branches affords only temporary relief.

*Central Circle.* 73. Under orders of Government in No. 987, Revenue, dated 3rd April 1917, Mr. Whitehead was deputed to Coorg to report on Mr. Tireman's scheme for the eradication of lantana and his notes were approved in Board's Proceedings, Forest No. 89, dated 17th August 1917.

In *Guntūr*, the standing growth in Nayanapalli casuarina plantations was attacked by insects due to unhealthy growth of trees owing to poor soil. In *North Cuddapah*, Anogeissus latifolia in the Nallamalais was attacked in June by caterpillars which defoliated the trees, but with the rains in July the insects disappeared and the damage minimised. The tender coppice-shoots of red-sanders were also in some cases attacked by a defoliating caterpillar about the same time.

Prickly-pear was removed from the coupes in some cases.

In *South Cuddapah*, in Rajampet and Kodur ranges the first flush of tender leaves of red-sanders and *Anogeissus latifolia* trees were found to have been eaten by caterpillars. Early rains brought the pest down to the ground. It was noticed that crows fed largely on these caterpillars. This is worth investigating and will be investigated into specially for the reason that Anogeissus is coming to the fore front as a species yielding tannin from its leaves. In *West Cuddapah*, creepers and soft-wood species in the worked coupes were removed. In *Nellore*, in some areas *Loranthus longiflorus* and *Loranthus bractealus* are exceedingly common, but the plants affected are usually the less desirable ones and the better species are either not parasitised at all or but lightly. In *Chittoor*, cutting and removal of creepers affecting standards were done.

*Southern Circle.* 74. *Prickly-pear.*—No real attempt has as yet been made to get rid of this pest. In North Vellore, a sum of Rs. 545 was spent in clearing 34 acres of the Palar plantations, whilst in Madura 344 acres were cleared in 16 fuel coupes at a cost of Rs. 680. In the Chitteris of South Salem the eradication has been entrusted to the Malayalis.

These are small beginnings and it is hoped that from them more determined attempts will be made to get rid of this pest.

*Spike.*—This subject will be treated in detail under research work. The spiked area is undoubtedly increasing in the North Salem and Trichinopoly districts and the disease is not stayed by the uprootal of diseased trees. This fell disease has now been found in the south-west corner of the Javadis where 65 trees on an area of 10 acres are showing distinct spike.

*Lantana.*—In Tinnevelly, lantana was uprooted over an area of 87 acres in Kuttalam reserve and 30 acres in Padarmalai working circle at a cost of Rs. 355 and Rs. 45 respectively.

*Cyclone.*—The South Arcot district was the centre of the very violent cyclone of the 22nd November and the reserves suffered considerably by the uprootal of trees. Far greater damage was however sustained in the sandalwood forests of South and West Vellore where sandal and other trees were uprooted by the thousand.

*Pyrausta machaeralis.*—A curious attack of this teak defoliator was observed in the Banavaram reserve of North Arcot in November 1916 and described by the Conservator in his inspection note on that district.

*Western Circle.* 75. *Spike disease in sandal.*—The attempts made in *Kollegal* to restrict spike by isolating affected areas is reported to have failed. But the project never had a fair trial and in spite of the most detailed and strict instructions how the work was to be carried out, nothing was done for over a year and a half, after which the report was

received that spike had crossed the isolation lines and had infected practically the whole working circle. The disease has continued to spread in *North Coimbatore* to such a degree that the usual outturn of sandal from the removal of diseased trees is expected to be trebled during the current year.

*Lantana.*—Lantana is being eradicated in the areas under working-plans in *North Malabar* and in *North*, *Central* and *South Coimbatore* and good progress has been made.

*Prickly-pear.*—As with lantana eradication is proceeding under regular clearing schemes in coupes under working-plans. A good deal of clearing was done in *Central Coimbatore*, but the work was not expeditiously and continuously performed. These areas have lately been inspected by the Conservator and it was found that a good deal of the burning was incompletely carried out and that pear had started again from the unburnt portions of clumps. These mistakes will be rectified. A scheme of clearing has been introduced in the *Kollegal* sandal working circles.

*Teak defoliators.*—*Hyblœa* were noticed in all the plantations of the Nilambur range and generally in the Amarampalam range. The damage, however, was small. Heavy rains in October and November checked the attacks.

## 4. Sylviculture.

### (*a*) *Natural reproduction.*

76. Owing to early and timely rains natural reproduction of all the important species in almost all the districts was good. In *Ganjām* sal seeded well, its natural reproduction appeared promising and cera rubber has spread itself naturally in the localities introduced. Coppice reproduction has everywhere been satisfactory and so has the crop of seedlings—as a result of the last two seasons there are now an enormous number of thriving young plants of valuable species. Bamboos (the species not being reported in *Vizagapatam*, *Dendrocalamus strictus* in *Gōdāvari Lower*) flowered in the hill reserves of these districts. In a portion of the area over which bamboos were weeded out in *Kurnool East* a dense growth of *Dalbergia latifolia* seedlings had come up. In *Kurnool South Hardwickia binata* has not flowered or seeded since 1914. In the Yerramalais of *Kurnool West* natural reproduction of *Hardwickia* in the stone walled areas was good and it is stated that in the Gundlabrahmeswaram Working Circle in areas saved from fire for a number of years grass diminished appreciably in height and density and this factor materially aided natural reproduction. *Northern Circle.*

77. In *Bellary*, in Kudligi range a large number of seedlings of *Hardwickia binata* is coming up in Sivapuram and its extension reserves, and the seedlings of *Diospyros melanoxylon* and *Dolichandrone crispa* in Kakupi and Keriaganahalli reserves. The natural reproduction of *Hardwickia binata*, *Acacia Sundra* and sandalwood in the leased forests is fair. In the closed areas of Sogi and Jittinakatta reserves the *Hardwickia binata*, *Dolichandrone crispa* and *Soymida febrifuga* reproduction is satisfactory. In the Jittinakatta reserve, along the nallas which feed Nichavanahalli and other tanks, sandalwood is doing well. Sissoo is growing well in the Moka plantation. In *Anantapur*, the sandalwood which has established itself in the Penukonda, Gundumala, Amagondapaliem, Yerracherla and Kadiri reserves is confined to some favourable localities and natural regeneration is observed in Penukonda, Gundumala and Amagondapaliem reserves. Coppice reproduction in the felled coupes of Illur and Pamidi reserves is good. In *Guntūr*, the reproduction of mada (*Avicennia officinalis*), Thilla (*Excœcaria Agallocha*), Kalingi (*Sonneratia apetala*) by seed in felled coupes and the land adjoining creeks is fair in Bapatla range. In the upland ranges natural reproduction of Yepi (*Hardwickia binata*), billudu (*Chloroxylon swietenia*), etc., is successful in felled coupes and in places not open to grazing especially in parts of Bollapalli main reserve and extensions 1, 7 and 8, Kakirala block II extension 6 of Vinukonda range, part of Mutukur, Gangalakunta and Kandlakunta reserves in Palnad range and part of Venkatayapalem in Sattenapalli range. The regeneration from coppice in babul areas is also satisfactory. In *North Cuddapah*, coppice reproduction in the felled coupes has been satisfactory especially that of *Pterocarpus santalinus* and *Anogeissus latifolia*. The natural regeneration from seed suffered and was mostly burnt by the huge fires of 1917. In *South* *Central Circle.*

*Cuddapah*, reproduction of the important species by seed was as usual hampered by drought, fire and cattle. "Thamba", *Shorea tumbuggaia* in the plateau of the Seshachellams seeded profusely. Germination of the seeds was excellent. In the worked coupes, reproduction by self sown seed is fair. Regeneration from coppice shoots in the felled areas is excellent specially in the case of red-sanders. In the Kodur and Upparapalli plantations, the reproduction of sandalwood by seed is good. In *West Cuddapah*, in all the fuel and improvement coupes, the reproduction by coppice was good. The natural reproduction of Elama, Neruddi, Red-Sanders and Satin wood is good. In *Nellore*, *Chloroxylon swietenia*, *Pterocarpus santalinus*, *Albizzia odoratissima* seeded well, and seedlings sprang up especially in the Velingondas, but the seedlings succumbed for the most part during the hot weather. In the Marlapudi reserve *Hardwickia binata* springs up profusely from seed, but the intensive grazing prevents practically any survival and there are very few poles to be seen. Reproduction by coppice shoots was satisfactory. In *Chingleput*, coppice reproduction in the felled coupes was satisfactory throughout. In *Chittoor*, natural reproduction of sandalwood is remarkably good in the sandalwood block in Nellipatla reserved forest. It is also good in the various sandal topes of Palmaner range; slowly but surely it is spreading in almost all the ranges of the district. Reproduction of red-sanders in Chittoor reserve was satisfactory. Coppice growth of *Pterocarpus santalinus* and *Marsupium*, *Hardwickia binata*, *Chloroxylon swietenia* and *Anogeissus latifolia* in Mamandur forests is very good. Reproduction by coppice has been good in all felled coupes closed against grazing.

*Southern Circle.*

78. *Sandal.*—The natural reproduction of sandal is reported to be good from all the principal sandalwood areas in South and West Vellore, North and South Salem and Trichinopoly.

In the Javadis, it is reported that the creeper cutting and general tending operations are having an excellent effect on regeneration.

A similar effect has been noticed on the Chitteris of South Salem where there has been a general flowering of the Strobilanthus.

Outside the regularly recognised sandal area there is no doubt of the spread of sandal in the Mordana reserve of North Vellore, and in Unjalnachi and Ulkombai forests of the Sirumalai Hills of Madura.

In Tinneveily, the Conservator was able to satisfy himself of the spread of this tree in Mundanthorai and Kuttalam but more especially in the Alagarkoil valley of Srivilliputtur range where there are now over 80 trees to the acre. This valley also shows instances of successful coppicing which is a comparatively rare phenomenon in this species.

This was a bad seeding year for *Hardwickia binata* in North Salem and *Hopea parviflora* in Tinnevelly.

The *Gluta travancorica* seeded very well in 1917 in Tinnevelly.

The seedling reproduction of *Pterocarpus marsupium*, *Dalbergia latifolia* and *Anogeissus latifolia* is reported to have been good in several districts.

Coppice reproduction on the whole was good.

The *Bambusa arundinacea* at Kuttalam flowered early in the year and the flowering is now extending to the Ambasamudram range.

*Western Circle.*

79. *North Mangalore* reports the extension of bamboo seeding to the ghats; and that it was a magnificent year for *Hopea*—the principal tree of the district. It was also a good season for sandal. *South Mangalore* sends similar reports as regards bamboo and *Hopea*. Teak reproduction from seed is said to have been very unfavourable in *North Malabar*. Sporadic seeding of bamboo continues in the valleys of *South Malabar*. Sandal regeneration was good in parts of *Kollegal* and the seeding of bamboo is spreading there also. The Conservator noticed good germination of *Pterocarpus Marsupium* in the Talamalai region in *North Coimbatore* which seems to be stimulated by a bad fire season. Teak is said to have done well in *South Coimbatore*.

(*b*) *Artificial reproduction.*

80. Form 75 shows the areas under plantations or cultural operations. *Northern Circle.*

*Regular plantation—Kurnool East.*—Small nurseries were maintained at Maddipenta and Peddachama to replace casualties and 4,610 teak seedlings were transplanted in the rains and the bamboo and other shoots which were suppressing the plants were cleared. *Kurnool West.*—The teak plantations at Nagaluti, Bairluti, Pasurutla, Rudracode, Sudem, Pangidi and Honkaram and the sandal plantation at Pecheruvu were maintained. The area newly planted was only 45 acres, further extension being hardly practicable owing to difficulty in watering. Investigations made during the year showed that the cost of plantations in the past has been as much as Rs. 400 per acre in at any rate one locality—an absolutely prohibitive figure. The mulberry plantation at Bairluti is in a flourishing condition and silk breeding is now in progress. Sandal seeds were dibbled under host plants in 20 acres in a more favourable locality at Pecheruvu and germinated fairly well: but many of the seedlings were browsed over by deer and cattle owing to inadequate fencing.

*Cultural operations.*—In *Ganjām* nothing new was done. *Vizagapatam.*—Sandal sowings in the Chinnamangalapuram tope were attended with partial success and the attempt to introduce sal and red sanders in the above tope and sal in the felled areas of Ichapuram, Avalanghi and Russellpeta coupes proved a failure. *Kistna.*—Sandal plants in the Kondapalli reserve are doing well. Babul seeds sown broadcast in the Nachugunta block IX germinated after floods; further sowing of babul was given up in Yellichitladibba extension I as the growth was unsatisfactory and Lumnitzera seeds were sown in 200 acres of Upputeru reserve (the result is not reported). *Kurnool West.*—In coupe II of the Gundlabrahmeswaram Working Circle teak seeds were dibbled in and most of them germinated. The areas here are not clean felled, so not much result need be expected.

81. Form No. 75 shows the area under artificial reproduction. *Central Circle.*

*Regular plantations.*—No new plantations were undertaken but 1,324 acres were sold in *Guntūr* and *Nellore* districts and the remaining area maintained during the year. In *Bellary* in Moka plantations the height of the older trees ranges from 20 to 30 feet and the height of casuarina plantation ranges from 16 to 34 feet.

*Cultural operations.*—In *Bellary*, sandalwood seeds were dibbled in Adōni East reserve and 40 seedlings are in healthy condition. Seeds of Hardwickia binata were dibbled in the failed mounds during the last season and they are in a healthy state. The saplings in the areas cultivated by ryots in Badanahal and Halharvi reserves are in good condition. In *Anantapur*, the sandal sowings in Kalyandrug South reserve, Kondapalle and Settur reserves have been a complete failure. Operations for the spread of sandal was carried out on a small scale in Kutagulla, Amagondapaliem and Dokkalakonda reserves. In *Guntūr*, 500 cashew nuts were sown in Vedullapalli reserve, 500 in Bapatla block I and 300 in Nayanapalli. Two thousand palmyra seeds were sown in Vedullapalli reserve and 3,000 in Ipurpalem. The seeds were all collected and sown by the forest subordinates. The germination of the seeds in almost all the areas was good and a good percentage of the seedlings is in a promising condition. In *South Cuddapah*, about 475 red-sander seedlings were transplanted in the Kodur red-sanders plantation from a nursery bed. About 200 of these died during the hot weather and have since been replaced with fresh seedlings. In *Nellore*, seeds and seedlings of Anogeissus latifolia were put out in small areas in Kanigiri. It is too early to pronounce on the result. In *Chingleput*, sandal seed sown in Kambakkam plateau was a failure and the experiment is being tried again. In *Chittoor*, red-sanders seeds were sown in Chittoor reserve but the seedlings withered away for want of sufficient moisture in the soil.

82. *Regular plantations.*—The only districts in which there are regular plantations are North Vellore, Madura and Tinnevelly. *North Vellore.*—Five acres were added to the Amerdi plantation being planted with teak, rosewood, red sanders and sissoo at a cost of Rs. 294. Coupe 1 of Banavaram working-circle and coupes 1 and 2 of Chenur working-circle were dibbled in with seeds of red sanders and *Hardwickia binata*. There are signs of germination. The blanks in coupe 4 of Virinjipuram, 14 of Tiruvallam and 13 of Kilminnal and in Pichanur topo were replanted. *Southern Circle.*

*Madura.*—No addition was made to the plantations. The planting out of young trees obtained from the sholas and dibbling of seed in sholas proved a failure.

*Tinnevelly.*—Only 5 out of 32 acres cleared for teak plantation at Kodamadi were planted. The seed supplied from South Coimbatore (Poonachi) was very poor and the monsoon was unfavourable. In Valliyur 200 bamboo cuttings were put out but only 87 survive. In Kuttalam range 1,335 seedlings were planted in coupe VI (*c*) of which rather less than half are alive.

The reclamation of the Teri reserve continued but the area sown has not been reported.

*Taungya—South Arcot.*—An area of 2 acres in Pakkam Hills was sown with 12 Madras measures of teak seeds under this system. Some germination has taken place. *Tinnevelly.*—Casualties in the Kani plantation area were replaced by planting about 9,000 seedlings. These Taungyas have not been added to as the Kanis have gone to the Kattalamalai estate.

*Cultural operations—South and West Vellore.*—Cultural operations as prescribed in the working-plan were carried out in the South and West Vellore divisions. Many of the seedlings which were looking healthy and strong died back during the hot weather. Unfortunately the operations carried out in May and June 1917 were restricted as most of the seed was blown off the trees by the cyclone. In some cases germination was observed six weeks after sowing.

*South Salem.*—One hundred acres in coupe I of compartments I and II of the Chitteri Sandalwood working-circle were fenced and sandal seeds were dibbled at a cost of Rs. 191. The District Forest Officer found germination excellent. Sandal seeds were also dibbled under bushes in the Harur reserve under the direct supervision of the District Forest Officer.

*Trichinopoly.*—Seventeen acres in Ariyur shola block were sown with sandalwood seeds and the area fenced. The result is being watched. Seeds of various species were sown in felled coupes but without much success.

*Tinnevelly.*—Hopea seeds were dibbled in lines at Kannikatti but only few seedlings were alive; but seeds sown in two nurseries did much better. Two hundred measures were dibbled between the old Hopea lines at Kannikatti and another two hundred in the adjoining area from which Lantana is being uprooted.

*Western Circle.*

83. *Regular plantations.*—Of the 27 acres clear felled in 1915–16 for planting in Mundakadava (*South Malabar*), only 4 acres were planted up, 6′ × 6′, at a cost of Rs. 178. A further area of 17 acres was felled this year and an area of 41 acres made ready for planting. About 22 acres of this was dibbled at stake with seed and the balance was planted with seedlings from a nursery. Airavillikava (44) 27 acres was clear felled and made ready for planting. Pitting and planting was partly completed at a cost of Rs. 737. In the *Nilgiris*, the 137 acres of experimental hardwooded *Eucalypti* were maintained and blanks in compartment 5, block III Snowdon (fuel), were filled up by pitting and planting.

*Taungyas—South Mangalore.*—Seven thousand two hundred teak, 1,000 *Hopea* and 600 jack were planted in new taungyas, but the result was not satisfactory. In *North Malabar* out of 76 acres opened last year, 42 acres is reported as successful. Fifteen acres in Tholpatti were newly opened. In the *Nilgiris*, 13 acres were opened and dibbled with teak.

*Cultural operations.*—Broadcast sowing of *Hopea* in Coondapoor (*Mangalore North*) was successful, but the area is not mentioned. Fifty acres in Hosebetta reserve was dibbled with sandal seed obtained from Coimbatore but had not time to germinate before the report was despatched. There is a great opening under favourable natural conditions for the propagation of sandal in this district. There was some activity in *Mangalore South* in the dibbling of *Hopea*. Over 30 acres in the Kadambilla, Parappa and Jalsur reserves were put down in seed, but the results are not reported. Group planting of teak continued in the Begur and Chedleth reserves (*North Malabar*). Sixteen thousand pits in the former and 10,000 in the latter were planted up, with fair success all round. In *South Malabar* Rs. 322 was spent in underplanting the teak plantations with miscellaneous species. Over 1,000 rosewood seedlings were also under-planted. Some sandal dibbling was done in *North Coimbatore* with partial

success in coupe VII, Ennamangalam. In *South Coimbatore*, 5·50 acres was dibbled with teak at Topslip and Mount Stuart. The regeneration plots of 1916 at Ulandi and Mount Stuart were inspected by the Conservator and are a great success.

*(c) Operations for improvement of the growing stock.*

84. Creepers were cut in all the districts of the circle. Thorny shrubs in *Kistna* and prickly-pear in *Kistna* and *Kurnool East* were removed. In *Vizagapatam* and *Kurnool South* overmature trees were cut out to make room for the young growing stock and to increase regeneration. In *Kurnool South* bamboos were thinned out for improving bamboos themselves or introducing better timber species and 12 small coupes in certain areas open to grazing were thinned, it is said, to improve the grazing though the item is again quoted under 'exploitation.' *Northern Circle.*

85. *Timber improvement fellings.*—In *North Cuddapah*, 2,305 acres; *South Cuddapah*, 1,878 acres; *West Cuddapah*, 1,195 acres; and in *Chittoor*, 546 acres were felled over in accordance with the working plans. *Coppice felling* was carried out in all the districts for supply of firewood. *Fencing.*—All felled coupes were fenced by contractors. *Cutting of creepers and climbers* was carried out in the three divisions of *Cuddapah* and in *Chittoor*. *Stone-walling* was done in the three divisions of *Cuddapah* and in *Chittoor*. *Bunding of streams.*—In *Bellary*, old bunds were repaired by subordinates. *Central Circle.*

86. The cutting of creepers affecting standards and other useful trees was carried out by subordinates in most districts and felled coupes were fenced. In South Arcot, crooked and hollow Dalbergia Latifolia saplings and trees were coppiced and fenced. Tending operations were undertaken in coupe 1 of compartments I and II of Chitteri Sandalwood working-circle of South Salem at a cost of Rs. 257. *Southern Circle.*

87. Light improvement fellings in favour of *Hopea* were carried out in *Mangalore North* over 724 acres and again over 3,613 acres for the same purpose in *Mangalore South*. Rupees 3,383 was spent in thinnings in the teak plantations, Nilambur, according to programme. Creeper cutting and weeding were also carried out. In the *Nilgiris*, 872 acres, compartment 3 Mudumalai was subjected to improvement fellings and unsound, dead, etc., trees removed in compartment 5 (825 acres). Thinnings in the Mutinad and Newman plantations were converted into charcoal. The sandal coupes of the year in *North Coimbatore* were cleared of interfering growth. Rupees 530 was spent in *South Coimbatore* in cleaning, weeding and opening up the canopy in favour of teak and rosewood at Mount Stuart and Punachi. *Western Circle.*

## 5. Exploitation.

*(a) System of management.*

88. The total area for which regular working plans were sanctioned was 2,535 square miles and the area dealt with under different sylvicultural systems are detailed below :— *Northern Circle.*

| Sylvicultural system. | Area in square miles. | Percentage. |
|---|---|---|
| (1) Clear felling ... ... ... ... ... | 124·00 | 4·89 |
| (2) Selection felling ... ... ... ... ... | 199·00 | 7·85 |
| (3) Simple coppice felling ... ... ... ... | 106·00 | 4·18 |
| (4) Coppice with standard felling ... ... ... | 256·00 | 10·10 |
| (5) Improvement felling (mostly selection) ... ... | 518·00 | 20·43 |
| (6) Unworked areas ... ... ... ... ... | 1,332·00 | 52·55 |
| Total ... | 2,535·00 | 100·00 |

### (i) Major Forest Produce.

*(1) Clear or Regeneration fellings.*

89. In *Ganjām* two plots of one acre each were clear felled as an experiment to gauge the regeneration of sal thereon and in *Kurnool West*, the areas planted in the Nallamalai teak plantations were clear felled.

(2) *Selection fellings.*

90. *Ganjām.*—Twenty sāl trees over 7½ feet in girth were extracted departmentally from Rambha reserve under the provisions of the working-plan. The demand for the timber under the indent system decreased as the indent rate was raised from 6 to 12 annas per cubic foot. *Kurnool East.*—In portions of Gudem, Markapur, Cumbum and Dornal ranges dead, dying, unsound misshapen and overmature trees were selected and felled by Chenchus and 100 palmyra trees in Chinaganapalli reserve and 50 in Badvid reserve were sold standing. In *Kurnool South* 216 palmyra trees in Owk Palmyra extension and Mundlapad reserves were selected and sold standing. *Kurnool West.*—Selection fellings combined with improvement fellings were carried out in the Gundlabrahmeswaram working circle and dead and fallen trees from the hill forests of Pecheruvu range were removed under the selection system.

(3) *Regular thinnings.*

91. Thinnings were made in compartments VIII and IX of Kandikuppa plantation in *Gōdāvari Lower* and bamboos in blocks leased to contractors were felled under this system.

(4) *Improvement fellings.*

92. In *Ganjām* 980 dead sāl trees were sold standing to contractors and 300 were worked departmentally. In *Vizagapatam* the wind-fallen sāl timber from Donabai and Somaralli reserves in Palakonda range was brought down to Jamparakota and Veeraghattam depots. In *Gōdāvari Lower* besides cleaning 38 acres of compartment XIII of Kandikuppa plantation and the collection of deadwood in compartments VIII to XIII, deadwood and bamboos were leased to contractors with a view to improving the growing stock. In *Kurnool East* a contractor was permitted to fell dead trees and those tamarind trees which are past the age of bearing fruit in the Utla fuel coupe, dead and dying trees in Guttabodia reserve were converted into fuel by the Chenchus of Chintalamudipi Gudem. In *Kurnool South* overmature and deteriorating trees were marked and removed from two coupes; twelve coupes for small timber and fuel were thinned out. In *Kurnool West* the timber coupes in the Nallamalai Terai working circles and a coupe in the Yerramalai were treated under this system.

(5) *Coppice with standards.*

93. Two fuel coupes in *Ganjām*, twelve in *Vizagapatam*, five in *Gōdāvari Lower*, five in *Kistna* and three in *Kurnool West* were felled under this system.

(6) *Simple coppice.*

94. Nine fuel coupes in *Ganjām*, ten in *Gōdāvari Lower*, five in *Kistna* and one block of 500 acres in the Coringa extension reserved land were leased.

(7) *Unregulated fellings.*

95. Permits were issued for removals from unreserves of classified timber in *Ganjām* and of timber, fuel and bamboos in *Vizagapatam*. In *Gōdāvari Lower* unregulated fellings were confined to Rampa and certain unreserves and the Mangrove fuel from Hope Island which forms part of the Coringa extension reserved land was as usual removed on permits issued by the Marine Department. In *Kurnool West* permits were granted only for the removal of palmyra trees.

*Central Circle.*

96. The total area under working plans was 1,006 square miles and the areas treated under different sylvicultural systems are shown below :—

| Sylvicultural system. | Square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| (1) Method of clear felling by compartment ... ... | 11 | 1·09 |
| (2) Simple coppice ... ... ... ... ... ... | ... | ... |
| (3) Coppice with standards ... ... ... ... | 324 | 32·21 |
| (4) Method of improvement fellings ... ... ... | 287 | 28·53 |
| (5) Area closed to felling or worked under no definite sylvicultural system ... ... ... ... | 384 | 38·17 |
| Total ... | 1,006 | 100 |

97. The total area of forests under working plans was 2,903 square miles. The various sylvicultural systems in force over this are shown in the following table :— *Southern Circle.*

| Sylvicultural system. | Area in square miles. | Per cent. |
|---|---|---|
| Clear fellings ... ... ... ... ... ... | 56 | 1·93 |
| Simple coppice ... ... ... ... ... | 181 | 6·23 |
| Selection fellings ... ... ... ... ... ... | 251 | 8·65 |
| Improvement fellings ... .. ... ... ... | 527 | 18·15 |
| Coppice with standards ... ... ... ... ... | 1,149 | 39·58 |
| Pastoral methods ... ... ... ... ... ... | 36 | 1·24 |
| Forests for which working plans have been prepared but not subjected to any definite working ... ... | 703 | 24·22 |
| Total ... | 2,903 | 100·00 |

(1) *Clear or regeneration fellings and* (2) *Simple coppice.*

98. The growth in 56 square miles of reserves was clear felled in South Arcot and in 7 square miles in Trichinopoly. Ten fuel coupes in each of the districts of South Vellore and South Salem were worked under simple coppice. In Madura, the simple coppice system was adopted only from 1st April 1917 as per prescriptions of the revised working plan in Sholavandan, Ayyalur and Natham ranges.

(3) *Selection fellings.*

99. The area shown under this head relates chiefly to bamboos. Selected sandalwood trees dead and dying on the Namakkal Pachamalais and on the Kollimalais of Trichinopoly were enumerated and felled under this system.

(4) & (5) *Improvement and coppice fellings.*

100. *Improvement fellings.*—In the early part of the year fifteen sandalwood coupes in South and West Vellore were worked under this system.

The same system was applied to the Hosur forests of North Salem and the Chitteri forests of South Salem.

The Pālār river side plantations were also worked under a system of improvement fellings.

*Coppice under standard system.*—The following coupes were worked under coppice with standards:—

23 fuel coupes of 1,830 acres in North Vellore,
23 fuel coupes of 1,443 acres in South Vellore,
6 fuel coupes of 699 acres in West Vellore,
41 fuel coupes of 3,040 acres in South Arcot,
6 fuel coupes of 687 acres in North Salem,
6 fuel coupes of 904 acres in South Salem,
25 fuel coupes of 1,987 acres in Trichinopoly,
4 fuel coupes of 200 acres in Madura, and
14 ghat forest coupes, 5 plain coupes and 13 tank-bed coupes in Tinnevelly.

(6) *Unregulated fellings.*

101. Unregulated fellings under the permit system were confined to unreserves under the management of the Revenue Department.

102. *Mr. A. W. Lushington's scheme* of working the evergreen forests on a large scale for the supply of timber for the rebuilding of Belgium and France was considered as applicable to the Kodamady forests of Tinnevelly.

Enumerations of sample plots made in the evergreen showed respectively

(1) Fifty-five tons per acre of timber.
(2) One hundred and three tons per acre of timber.
(3) Two hundred and fifteen tons per acre of timber.

As all the branchwood would be of great value in this division either in the form of fuel or of charcoal briquettes, a careful study of these forests will have to be made.

*Western Circle.*

103. The total area of reserved forests covered by working plans is 1,846 square miles. The various sylvicultural systems in force over this area are shown below:—

| Sylvicultural system. | Area in square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| Method of clear fellings by compartments ... ... | 16 | 0·87 |
| Selection method ... ... ... ... ... ... | 323 | 17·49 |
| Simple coppice ... ... ... ... .. ... | 12 | 0·65 |
| Coppice with standards ... .. ... ... ... | 191 | 10·34 |
| Method of improvement fellings ... ... ... | 126 | 6·83 |
| Unregulated fellings ... ... ... ... ... | 9 | 0·49 |
| Forests for which working plans have been prepared but not subjected to any definite system of working ... | 1,169 | 63·33 |
| Total ... | 1,846 | 100·00 |

(1) *Clear or regeneration fellings.*

104. *South Malabar.*—17·32 acres of mixed forests in New Amarampalam reserve and the Airavillikava teak plantations 1,844·27 acres were clear felled.

(2) *Selection fellings.*

105. *Mangalore North.*—Twenty acres in coupe II of Madibare timber working circle were felled. *Mangalore South.*—Four hundred and ninety-one trees which yielded 13,100 cubic feet of timber were felled in Kadambilla coupe IX. The extraction of overmature timber in coupe I of Jalsur East continued. *Malabar North.*—Four hundred and fifteen acres in coupe II of Chedleth and 449 acres in coupes XIX and XX of Begur were felled. *Kollegal.*—Spiked sandal trees were extracted from Araipalayam, four coupes of Bailur and three of Madeswaranmalai working circles; the total outturn was about 94 tons. *North Coimbatore.*—Two coupes covering 5,792 acres from which 5,126 'spiked' sandal trees which yielded 55 tons were removed. *South Coimbatore.*—The fellings in coupes IX and X of Punachi working circle were completed.

(3) *Simple coppice.*

106. Forty-five acres of eucalyptus and acacia plantations in *The Nilgiris* and two coupes covering 154 acres in *North Coimbatore.*

(4) *Coppice with standards.*

107. Six hundred and seventy-eight acres in *Mangalore North* and forty-seven acres in Nerankimale coupe III, portions of two coupes in Kasaragod range, and a sample plot of six acres in Kalanjimale reserve in *Mangalore South* were coppiced. Portions of two coupes in *Kollegal*, eight coupes (682 acres) in *North Coimbatore*, twenty-three coupes (1,814 acres) in *Central Coimbatore* and seven coupes covering 392 acres in *South Coimbatore* were felled for fuel. Five coupes for supply of small timber, drag poles and agricultural implements were also felled in *North Coimbatore.*

(5) *Improvement fellings.*

108. *Mangalore North.*—Two hundred and sixteen acres in Pilarkan and Jarvattukadavu reserved forests were felled for fuel. *Mangalore South.*—2,849 cubic feet of timber in Parappa reserve. *South Malabar.*—The teak plantations were thinned and the yield was 66,058 trees and saplings. Sample plots and subdivision lines were felled in connexion with the preparation of final working plan. *The Nilgiris.*—825 acres in compartment 5 of block I of Mudumalai working circle were worked over; the yield was 19,834 cubic feet of teak and 4,273 cubic feet of other species. Cutting of ill-grown trees and girdling of inferior species were carried out over an area of 873 acres in compartment 3. Six acres in compartment 2 of Mutinad, about two acres in compartment 1 of Newman and seven acres in Benne plantations were thinned; the outturn from the first two plantations was used for the manufacture of charcoal.

(6) *Unregulated fellings.*

109. *Mangalore North.*—Firewood required for working 115 cinnamon oil stills and for manufacturing catechu was removed from unreserved lands. *South Malabar*—miscellaneous trees which yielded 545 cubic feet were felled from the site of the nursery for the new teak plantations. The *Nilgiris*—Sandalwood trees which yielded about five tons were extracted from unreserved lands in Segur range. Dead trees in the sholas were converted into fuel and supplied to the adjoining estate owners. Small timber and firewood required by the public were as usual removed on permits. The Badagas obtained their annual consumption of firewood on consolidated permits at one rupee per household. *North Coimbatore*—68,093 cubic feet of timber and 26,979 cubic feet of fuel were removed on permits from unreserved lands. Besides the above mentioned items, forest produce in accordance with the privileges under the rules under section 26 of the Forest Act was removed from the unreserved lands in all the districts.

(ii) MINOR FOREST PRODUCE.

(1) *Bamboos.*

110. Throughout the circle bamboo coupes in reserved forests were sold to contractors, but in *Gōdāvari Upper* on a two-year contract; in *Kurnool East* the Chenchus of Gudem, Markapur and Dornal ranges were also engaged in the collection of bamboos and bamboo splits from areas not leased out. *Northern Circle.*

(2) *Miscellaneous produce.*

111. Seigniorage was collected on gravel, earth, and other minerals and manure leaves, and the usufruct of mango, tamarind and other fruit trees auctioned everywhere; the right to collect *cassia* barks of the two kinds (*Fistula* and *Auriculata*) were also leased out except in *Gōdāvari Upper* and in part of *Kurnool East* where the removal was carried out by Chenchu agency. In *Ganjām* the Khonds were allowed to remove free from reserves minor produce such as tamarind and other fruits, honey, wax, etc., in return for service rendered in fire and general protection. In *Vizagapatam* thatching grass was leased out to contractors. In *Kistna* a quarry in a reserve was leased to Local Fund Department and a "napa" flag stone quarry in another reserve was leased out. In *Kurnool East* unsuccessful attempts were made to see if there was demand for the bark of *Ventilago madraspatana* and *Morinda citrifolia*. In *Kurnool West* minor forest produce in the Nallamalais was collected by the department through the agency of the Chenchus and auctioned and in the Yerramalais minor forest produce was sold reservewar. Seigniorage fees were collected in *Vizagapatam* from the purchasers of minor produce from hill men and in *Gōdāvari Lower* permits were as usual issued for all minor produce from Rampa as well as *Yellavaram* and *Polavaram* agencies.

(3) *Extraction of fodder.*

112. The right to cut and remove thatch and fodder grass from Coringa and Kandikuppa reserves in *Gōdāvari Lower* and the collection of fodder grass from the closed areas and leaves from Mangrove forests in *Kistna* were leased out as usual. The right to cut and remove fodder grass on the Cantonment ground at Samalkota was leased out by the Revenue Department and the rental credited to Forest Department. Free removal of grass in head loads were allowed in *Kurnool East* and *West* except to the defaulting people of two villages who refused to render assistance in putting out fires and in *Kurnool South* some grass was removed in cart loads on payment in the Sirvel range.

(4) *Hay-making.*

113. No operations were undertaken except in *Kurnool South* where the grass was collected, dried and stored for feeding Government bulls in the hot weather.

(5) *Grazing.*

114. The permit system was in force in all the divisions. The revenue derived was Rs. 1,22,397 against Rs. 1,19,005 in the previous year. The increase occurs chiefly in *Ganjām*, *Kurnool East* and *Kurnool West*, but partly counterbalanced by decrease in *Vizagapatam*, *Gōdāvari Upper*, *Kistna* and *Kurnool South*. The increase in *Kurnool East* is believed to be due partly to the raising of penta permits from four

annas to one rupee per quarter; in *Kurnool West* to more efficient protection The decrease in *Vizagapatam*, *Gōdāvari Upper* and *Kistna* is accounted for by cattle mortality and by less number of foreign cattle having resorted to the forests and in *Kistna* by the disafforestation of three reserves. The less collection in *Kurnool South* was due to the collection of fees in Giddalore range not having been done at the proper time.

(1) *Miscellaneous produce.*

*Central Circle.*

115. The right to collect minor produce was leased out to contractors as usual in all the districts except in the Sriharikota range of *Nellore district* where for local reasons the produce continued to be collected and sold departmentally. The increase in the price of manure leaf to Rs. 2 per cart-load in *West Cuddapah* had no doubt a deterrent effect on the demand. During the year under report, in addition to usual Tangedu (Cassia auriculata) sales, the Rela (Cassia Fistula) bark was sold in all districts.

Permits continued to be issued for stone, earth and road materials.

(2) *Extraction of fodder.*

116. The lease by Military Grass Farm Department continued in *Bellary*, *Anantapur* and *West Cuddapah* at Rs. 2 per ton of made-hay. The grass in babul areas alone was leased out in *Guntūr district*. In *Bellary*, Mr. Howes cut and removed 860 tons. In *Nellore*, the lessees of kanchas who undertook the protection of adjoining areas closed to grazing were given the privilege of removing fodder grass therefrom. It is not reported to what extent this privilege was availed of.

(3) *Free removal of grass.*

117. In *Bellary*, free removal was not allowed except for domestic purposes in the Adōni range and it was allowed only on permit. In *Anantapur*, *North*, *South and West Cuddapah divisions of Cuddapah district and Chittoor* free removal was allowed as usual except from the area under cultural operations.

In *Anantapur district* the free removal was prohibited in one reserve of Bukkapatnam range and all the reserves of Tadpatri range as the villagers failed to assist in putting out fires. In *North Cuddapah*, some of the villagers adjoining Lankamalais and Nallamalais were punished, in addition to enhancement of grazing fees, with suspensions of the right of free removal of grass. In *Guntūr*, the concession allowed last year was continued this year also and the system is reported to have worked well. In *Nellore*, free removal was permitted in Veligondas and Yerrakonda Hill Forests and the concession is reported to be much appreciated. The concession had to be withdrawn in one case for refusal to assist in fire protection.

(4) *Hay-making.*

118. There was no departmental operation.

(5) *Grazing.*

119. The revenue realized during the year was Rs. 3,12,331 against Rs. 3,18,777 in the previous year. Though there was a decrease in the total revenue, there was increase in *Anantapur*, the three *Cuddapah* divisions, *Nellore* and *Chingleput*; but this was counterbalanced by decrease in the other districts, viz., *Bellary*, *Guntūr* and *Chittoor*. The increase in *Anantapur* is reported to be due to better patrolling by the subordinates, in *Cuddapah* divisions to enhanced grazing fees on Nellore cattle and to enhancement of grazing fees in certain reserves, in *Nellore* to further extension of the kancha system throughout the district except in a part of the Sriharikota range. The decrease in *Bellary* was due to handing over V class reserves to panchayats, in *Guntur*, to exclusion of goats from all reserves and sheep from certain reserves and in *Chittoor*, to closure of a reserve to grazing and to the collection of grazing revenue in June of last year which had been taken to last year's statistics. In *South Cuddapah*, a grazing scheme for the Seshachellams was submitted to Board and the Board in its No. 1493, Routine, dated 8th December 1916, recorded it. In *Nellore*, in order to popularize the kancha system and make its advantages better understood a Deputy Collector was again placed on special duty for three months. A long and interesting report on the system prepared by the special officer M.R.Ry. A. Ramanuja Achariyar has been received and will in due course be forwarded to the Board.

(1) *Miscellaneous produce.*

120. Minor forest produce was as a rule worked out. The issue of permits for leaves for manure, which has ruined so many of the forests of this circle, is being restricted in North, South and West Vellore and has been stopped in the class II forests of South Arcot and Trichinopoly. *Southern Circle.*

(2) *Collection of tan stuffs.*

121. In *Tinnevelly*, a departmental collection of avaram bark was made of 9,800 lb. which was sold at Rs. 34 per 500 lb. Unfortunately the collection price has not been reported.

In *North Arcot*, 130 quarters of Divi Divi pods were collected from the river-side plantations but were not sold owing to want of demand.

In *Madura*, after the close of the year samples of 'Dhwva sumac' (powdered Anogeissus latifolia leaves) were collected on the Kodaikānal ghat. These were pronounced by Mr. Pilgrim to be of very high tannin value and rough tests made at Trichinopoly showed that they contained more than double the quantity of tannin found in *Cassia auriculata* or in *Cassia fistula*, the two tan stuffs most in demand.

Similar collections are being made in South Vellore.

*Cassia fistula* was leased for the first time for several years in all the districts of this circle.

(3) *Extraction of fodder.*

122. Free removal of grass was allowed in North, South and West Vellore and South Arcot. In North Salem, the grass in 21 closed coupes and one specially protected block was leased for Rs. 166. In South Salem and Trichinopoly, free removal or sale of grass was not permitted. In Madura, the removal of Hariali grass from the Bryant Park reserve in Kodaikānal range was allowed as usual on permits. In Tinnevelly, grass was included in the minor forest produce lease.

(4) *Hay-making.*

123. In North Vellore, the Banavaram, Kylasagiri and Panamadangi reserves and the Palar river-side plantations were leased out during the year on payment of a royalty of Rs. 2 per ton of hay removed and Rs. 741 realized during the year as against Rs. 774 in the previous year.

(5) *Grazing.*

124. The revenue derived from grazing was Rs. 1,68,563 against Rs. 1,69,467 in the previous year.

(1) *Bamboos.*

125. Bamboos were extracted departmentally in the *Mangalore* divisions and *South Malabar* for rafting and floating timber. Four coupes covering 2,921 acres in *Mangalore North*, three coupes (area not reported) in *Mangalore South*, ten coupes (21,328 acres) in *North Coimbatore*, eighteen coupes of 2,969 acres in *Central Coimbatore*, five coupes of 3,109 acres and four blocks (area not furnished) in *South Coimbatore* were leased out. Removals on permits were allowed in *North Malabar*, the *Nilgiris*, *Kollegal* and *South Coimbatore* to meet local demands, from the natural forests in *South Malabar* for floating timber by purchasers and from the unreserved lands in *Mangalore North*. *Western Circle.*

(2) *Miscellaneous produce.*

126. Minor products of importance were leased out except in the Kanoth, Mudumalai and Tunacadavu ranges where they were collected departmentally. In *Mangalore North* the manufacture of catechu and in *Central Coimbatore* the collection of deer horns were also left to departmental agency. Owing to the scarcity of barks both *Cassia auriculata* and *Cassia fistula*, this circle was scarcely affected by the war demand.

(3) *Extraction of fodder grass.*

127. The removal of fodder grass on payment was permitted in the Beypore tope in *South Malabar*, in the *Nilgiris*, parts of *Central Coimbatore* and in the other divisions of *Coimbatore*. The grass in the Erode range in *Central Coimbatore* was leased out. The free removal of thatching grass in *Mangalore* divisions and by the Todas on the

plateau in the *Nilgiris* was continued. The concession of free removal of grass from the forests of *North Coimbatore* was allowed on the condition of being charged fees after the occurrence of fires and was not permitted in the other divisions of *Coimbatore* where there was no necessity; it was not required in *Malabar* where the demand was met from outside reserved forests.

(4) *Hay-making.*

128.—Nil.

(5) *Grazing.*

129. Grazing was as usual controlled by issue of permits except in *South Malabar* where the forests are closed to grazing and in the areas handed over to the management of panchayats. The grazing fees in *North Coimbatore* were doubled as a punitive measure for incendiarism. The revenue derived from grazing and fodder grass was Rs. 1,00,575 as against Rs. 79,320 in the previous year.

*(b) Agency of exploitation.*

(i) Departmental Agency.

*Northern Circle.*

130. Form No. 76 in thousands and No. 77 in units show separately the different classes of produce collected and Form No. 78 the stock disposed of and the balance remaining.

The following abstract shows the forest produce removed departmentally and compares the outturn in 1915–16 and 1916–17 and the percentage of the total outturn brought out by this agency:—

| Description. | 1915–16. | 1916–17. | Value. | | Percentage extracted by Government 1916–17. |
|---|---|---|---|---|---|
| | | | 1915–16. | 1916–17. | |
| | C.FT. | C.FT. | RS. | RS. | |
| Timber .. .. .. .. .. | 271,447 | 124,696 | 82,271 | 55,326 | 10·6 |
| Fuel .. .. .. .. .. | 648,750 | 260,466 | .. | .. | |
| | NO. | NO. | | | |
| Bamboos .. .. .. .. .. | 259,837 | 154,564 | 4,533 | 2,659 | 4·99 |
| | MDS. | MDS. | | | |
| Minor produce .. .. .. .. | 38,199 | 27,362 | 8,314 | 5,340 | 1·08 |

The principal factor which stands in the way of handing over practically all extraction to contractors appears to be the need in the Kurnool division of providing work for the Chenchus. The decrease in timber occurred chiefly in *Ganjām, Gōdāvari Upper* and *Lower* and in *Kurnool West* due to the introduction of the contract system; there was a slight increase in *Kurnool East* due to the employment of Chenchus on timber collection and in *Kurnool South* due to a reversion to departmental work as contractors could not be found. The decrease in fuel occurred in all the districts except in *Gōdāvari Upper* and *Lower* where the increases were slight and is attributed to the transfer of work to contractors. The decrease in bamboos was also due to the same cause.

Minor produce collected was 27,362 maunds against 38,199 maunds in the previous year. The decrease in minor forest produce was in *Kistna* due to the disafforestation of Kanukollu reserve from which Divi Divi pods used to be collected departmentally in the past and in *Kurnool East* due to the failure of the crop of soapnuts and in *Kurnool South* due to the minor forest produce having been leased to contractors.

(ii) Purchasers.

131. There has been increase in the removal of major and minor produce on the whole in the Circle. The increase in *Gōdāvari Lower* is chiefly accounted for by the classification by contractors of good quality of fuel into timber and in *Kistna* by the larger number of assignments of lands under darkhast and by the sale of more coupes. The increase in fuel was chiefly due in *Gōdāvari Lower* to removals for munition purposes, in *Kistna* to the sale of three reserves and in *Kurnool South* to the sale of more fuel coupes. The increase under bamboos is trifling and under minor produce due to the removal of the bark of *Cassia fistula* and an increased demand for that of *Cassia auriculata.*

(iii) and (iv) RIGHT AND PRIVILEGE-HOLDERS AND FREE GRANTEES.

132. The following statement shows the estimated quantity and value of produce removed under the above heads :—

| Agency. | Timber. | | Fuel. | | Bamboos. | Minor produce. | Grazing. | Total. |
|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right and privilege holders .. | 58,528 | 4,808 | 582,203 | 5,868 | 439 | 23,571 | 2,419 | 36,605 |
| Free grantees .. .. .. | 76,737 | 11,328 | 2,748 | 86 | 1,765 | 649 | 3,785 | 17,613 |

(i) DEPARTMENTAL AGENCY.

133. No departmental operations were undertaken. Four hundred casuarina poles were supplied to Engineer Stores Officer, Bombay, from Guntūr. The decrease under timber is due to less extraction for departmental buildings in *South Cuddapah* (old East Cuddapah) than in previous year. The increase under *fuel* and *bamboos* was due to larger quantity collected for burning bricks and tiles for departmental buildings in Cuddapah divisions and to rectification of fuel coupes leased by contractors after expiry of contract in *Chittoor*. The increase in minor produce is due to better season and greater energy by Range Officer, Sriharikota, Nellore district. *Central Circle.*

(ii) BY PURCHASERS.

134. *Timber.*—The decrease is due to fewer darkhast applications and to more fuel extracted from improvement coupes than timber in *West Cuddapah.*

*Fuel.*—The increase is due to increase in the number of fuel coupes and the sale of more fuel in unreserved lands in *Bellary* and the greater quantity of fuel exploited from coupes leased out in *West Cuddapah* and sale of good many withered and wind-falls in *Chingleput.*

*Bamboos.*—The increase is due to removal of greater number of bamboos by the contractors.

*Minor produce including grazing.*—The increase is due to sale of Rela (Cassia Fistula) bark during the year and to better prices obtained for Tangedu leases in general. The bark of Cassia Fistula had not been sold in this circle for the past several years.

(iii) RIGHTS AND PRIVILEGES.

135. The details for free removal of grass appear in paragraph 26 supra. In *North Cuddapah*, 286 cows at one anna were permitted to graze by the villagers of Chennupalli and Gopavarampalli. In *South Cuddapah*, 678 cows and bulls of the ryots of Settigunta and its hamlets were allowed according to the settlement of Settigunta reserve. In *West Cuddapah*, permits were issued for 609 cows at As. 1-6 and 155 sheep at 9 pies for grazing in Palakondas.

(iv) FREE GRANTS.

136. The statement below gives the details of free grants made during the year, chiefly for rebuilding houses destroyed by fire and floods. In *Nellore*, grants were made for building huts in criminal settlement.

| — | Timber. | | Fuel. | | Bamboos. | | Grass and grazing. | Other minor produce. | Total value. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value. | Cubic feet. | Value. | Number. | Value. | Value. | Value. | |
| | | Rs. | | | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. | 42 | 5 | .. | .. | .. | .. | 127 | .. | 132 |
| Free-grantees .. | 58,968 | 7,213 | .. | .. | 5,080 | 77 | 174 | 567 | 8,031 |
| Total .. | 59,010 or 59,000 | 7,218 | .. | .. | 5,080 | 77 | 301 | 567 | 8,163 |

(i) Departmental Agency.

*Southern Circle.*

137. The work done by departmental agency is chiefly confined to the extraction of sandalwood and represents only 1·1 per cent of the total outturn.

(ii) By Purchasers.

138. There has been increase in the removal of timber, fuel and bamboos and decrease in that of minor forest produce.

*Timber.* + 30,000 c. ft. due to increase in the collection of the value from lands assigned on darkhast in North Salem and Trichinopoly and to the large outturn from trees blown by cyclone of November 1916 in North Vellore.

*Fuel.* + 531,000 c. ft. due to sale of a large number of trees blown down by cyclone especially in unreserves of North, South and West Vellore divisions. In South Arcot the increase was from coupe sales and the sale of entire growth in reserves and from darkhast tree valuations from unreserved lands. In Tinnevelly, the increase was due to better demand for firewood.

*Bamboos* + *Rs.* 10,276.—The increase is due to a matter of adjustment of lease amounts and not to any real increase in the outturn of bamboos.

*Grazing and minor produce,—Rs.* 565.—The decrease is small and calls for no remarks.

(iii) Rights and Privileges.

139. The usual privilege allowed to the Malaiyalis for grazing at reduced rates was continued in North Vellore. In the Javadis of South and West Vellore, a complete village system has been established in which in return for free grazing and fire rewards the Malaiyalis are protecting the particular portion of forests assigned to them for grazing. This system worked very satisfactorily during the year. A similar system has been in vogue in the Chitteris of South Salem for some years and continues to be worked with success.

(iv) Free Grants.

140. The estimated value of free grants was Rs. 19,383 against Rs. 8,608 in the previous year. The increase was chiefly in South Arcot due to the unusually large applications for rebuilding houses and huts damaged and destroyed by the cyclone. The total value of the grant in South Arcot under timber was Rs. 13,280 as against Rs. 802 in the previous year.

The quantity and estimated value of produce removed by right-holders and free grantees are shown in the following abstract:—

| — | Timber. | | Fuel. | | Bamboos. | Grass and grazing. | Other minor forest produce. | Total. |
|---|---|---|---|---|---|---|---|---|
| | 1,000 c. ft. | Value. | 1,000 c. ft. | Value. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | .. | .. | .. | .. | .. | .. | 1,051 | 1,051 |
| Free-grantees .. .. | 38 | 15,409 | 4 | 170 | 480 | 3,311 | 13 | 19,383 |
| Grants at reduced rates .. | .. | .. | .. | .. | .. | 109 | .. | 109 |
| Total .. | 38 | 15,409 | 4 | 170 | 480 | 3,420 | 1,064 | 20,543 |

*Western Circle*

141. *Major produce.*—Nineteen per cent of the total outturn was extracted by this agency. The important works carried out were—*Mangalore North.*—Felling of one timber and one fuel coupes for want of offers, and improvement fellings. *Mangalore South.*—Selection fellings in Kadambilla coupe IX, improvement fellings in Parappa compartment I and Nerankimale coupe III and the felling of a sample plot in Kalanjimale reserved forest. *North Malabar.*—The selection fellings referred to in paragraph 105 supra which yielded 124, 927 cubic feet oftimber. *South Malabar.*—Thinnings in teak plantations and rafting and floating logs and saplings to sale depot. *The Nilgiris.*—Extraction of sandalwood in Segur and felling and carting of fuel in Coonoor and Ootacamund ranges. Sandal fellings in *Kollegal* and *North Coimbatore.*—*Central Coimbatore.*—Felling of trees along the South Indian Railway line at Walayar and the rectification of contractors' faults in some of the fuel coupes. *South Coimbatore*:—Selection fellings in coupes IX and X of Punachi working-circle and the transport of timber from the Tekadi leased forests to depots.

*Minor produce.*—The particulars are mentioned in paragraphs 125 and 126 supra.

142. *Disposal of produce at the edge of the forests.*—Fuel felled in Pilarkan and Jarvattukadavu reserves in *Mangalore North* was sold at the edge of the forests. *Mangalore South.*—Eight hundred and ninety-one cubic feet of timber was sold in roadside depots at the edge of coupe IX of Kadambilla. Fuel from Muliar and Nerankimale forests were sold at coupe sides. *South Malabar.*—Teak saplings derived from thinnings in Edacode, Airavillikava, Arevakode and Chatamborai plantations were sold at river-side depots and at stump sites. In *North Coimbatore* small timber and agricultural implements were retailed in forest depots.

(ii) By Purchasers.

143. *Major produce.*—Five thousand six hundred and fifty-two cubic feet of standing timber in compartment 1 of Jalsur East in *Mangalore South*, 19,660 cubic feet in sub-coupes A and B of coupe II of Chedleth and in Kanoth forest in *North Malabar* and 990 cubic feet in reserved forests in *The Nilgiris* were felled by contractors. Fifteen fuelcoupes in *Mangalore North*, one coupe in *Mangalore South* and all the fuel coupes in the *Coimbatores* were sold standing.

*Minor produce.*—The extraction of bamboos and the collection of miscellaneous produce referred to in paragraphs 125 and 126 supra.

(iii) and (iv) By right-holders and under privileges and free-grants.

144. The quantity and estimated value of produce removed by right-holders and free-grantees are given in the following statement:—

| — | Timber. | | Fuel. | | Bamboos. | | Grass and grazing. | Other minor produce. | Total. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet. | Value | Cubic feet. | Value. | Number. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | 23,355 | 17,896 | .. | .. | .. | .. | .. | .. | 17,896 |
| Free-grantees .. .. | 3,892 | 1,446 | 66 | 4 | 4,292 | 36 | 1,014 | 130 | 2,630 |
| Total .. | 27,247 | 19,342 | 66 | 4 | 4,292 | 36 | 1,014 | 130 | 20,526 |

The value of timber enjoyed by right-holders increased from Rs. 6,180 to Rs. 17,896. The increase was in *Mangalore* divisions due to larger removals of reserved trees from kumaki lands and to the lowering of the minimum girth of trees to be exploited from such lands from six to four feet and in *South Malabar* to the grant of timber to the Uralan of Trikkaliyur devaswom for repairs to a temple in accordance with the terms of the lease for leased forests. The estimated value of produce removed by free-grantees increased from Rs. 1,789 to Rs. 2,630. The grants made were chiefly for construction of and repairs to temples, rebuilding houses destroyed by fire and repairs to Toda munds in *The Nilgiris*. The Badagas in *The Nilgiris* continued to remove fuel for their requirements on payment of Re. 1 per annum per house. As mentioned in the last year's report the actual value of firewood collected by them and the damage caused to the forests were considerable. One temple elephant in *North Malabar* and the buffaloes of Todas in *The Nilgiris* were allowed free grazing in reserved forests, the estimated value of which was Rs. 1,014.

145. *Outturn and sources of Forest produce.*

*Northern Circle.*

| Agency. | Timber in cubic feet including sandalwood. | | Fuel in cubic feet. | | Bamboos in value. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| | | | | | Rs. | Rs. | | |
| Government .. .. | 271,447 | 124,696 | 648,750 | 260,466 | 4,533 | 2,659 | 8,314 | 5,340 |
| Purchasers (including confiscation). | 906,369 | 913,922 | 4,074,398 | 4,365,001 | 1,41,664 | 1,45,301 | 2,74,819 | 2,75,990 |
| Right-holders .. .. | 167,198 | 58,528 | 582,195 | 582,203 | 407 | 439 | 23,869 | 25,990 |
| Free grantees .. .. | 47,520 | 76,737 | 3,462 | 2,748 | 278 | 1,765 | 119 | 4,434 |
| Total .. | 1,392,534 | 1,173,883 | 5,308,805 | 5,210,418 | 1,46,882 | 1,50,164 | 3,07,121 | 3,11,754 |

The variations have been explained above except in the case of "free grantees." Under these items the increase has been due to serious floods in the *Kistna* and *Kurnool* districts in October and November 1916. The rates for grazing fees levied in the several divisions are shown in Form No. 74. The number of animals licensed to graze on permits was 588,324 against 575,620 in the previous year.

*Central Circle.*

146. The total outturn of produce collected by different agencies is compared with the previous year in the statement below :—

| Agency of exploitation. | Timber in cubic feet in thousands including sandalwood. | | Fuel in thousands of cubic feet. | | Bamboos in number. | | Minor produce (including grass and grazing) gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16 | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| By Government Agency | 20 | 11 | 24 | 56 | 1,773 | 5,469 | 8,487 | 12,575 |
| By purchasers (including confiscation). | 931 | 827 | 6,389 | 6,860 | 2,578,071 | 3,376,598 | 7,63,001 | 9,61,640 |
| By right-holders .. | .. | .. | .. | .. | .. | .. | 138 | 127 |
| By free grantees .. | 47 | 59 | .. | .. | 15,288 | 5,080 | 313 | 741 |
| Total .. | 998 | 897 | 6,413 | 6,916 | 2,595,132 | 3,387,147 | 7,71,939 | 9,75,083 |

The variations have already been explained. The rates of grazing fees levied in several districts are given in Form No. 74. The number of animals licensed to grazing on payment was 1,021,881 against 1,214,480 of last year.

*Southern Circle.*

147. The total outturn is given in the following statement :—

| Agency of exploitation. | Timber including sandalwood in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos value in Rs. | | Minor produce including grass and grazing value in Rs | |
|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| | | | | | Rs. | Rs. | | |
| By Government agency .. | 17 | 25 | 70 | 38 | 289 | 640 | 533 | 1,402 |
| By purchasers .. .. | 798 | 828 | 4,239 | 4,770 | 1,10,692 | 1,20,968 | 3,76,879 | 3,76,914 |
| By right-holders .. .. | .. | .. | .. | .. | .. | .. | 1,115 | 1,051 |
| By free grantees .. .. | 19 | 38 | 3 | 4 | 454 | 480 | 5,819 | 3,324 |
| Total .. | 834 | 891 | 4,312 | 4,812 | 1,11,435 | 1,22,088 | 3 84,346 | 3,82,091 |

The variations have already been explained. The rates for grazing fees levied in the several districts are shown in Form No. 74. The number of animals licensee on payment was 908,842 against 1,059,589 in the previous year.

*Western Circle.*

148. The subjoined table compares the outturn of produce through all the agencies with that of the previous year—

| Agency of exploitation. | Timber including sandalwood in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos in value. | | Minor produce including grass and grazing in rupee | |
|---|---|---|---|---|---|---|---|---|
| | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| | | | | | Rs. | Rs. | | |
| By Government agency. | 309 | 383 | 621 | 661 | 5,772 | 4,896 | 20,518 | 13,451 |
| By purchasers .. | 379 | 928 | 3,219 | 3,480 | 35,841 | 41,275 | 1,37,3 | 1,58,057 |
| By right-holders .. | 15 | 23 | .. | .. | .. | .. | .. | .. |
| By free-grantees .. | 4 | 4 | 1 | .. | 88 | 36 | 915 | 1,144 |
| Total .. | 707 | 1,338 | 3,841 | 4,141 | 41,701 | 46,207 | 1,58,801 | 1,72,652 |

*By departmental agency—Major produce—Timber.*—The increase was chiefly in *South Malabar* due to clear felling of 27 acres in Airavillikava plantations and the felling of sample plots and subdivision lines in connection with the preparation of final working plan for the teak plantations.

*Fuel.*—The increase was due chiefly to exploitation of larger areas in *Mangalore* divisions and to the supply of fuel to the Pactolus Gold Dredging Syndicate in *South Malabar*. *Minor produce—Bamboos.*—The decrease of Rs. 876 calls for no special remarks. *Other produce.*—The total outturn decreased by 50 per cent. The decrease was due to a fall in the demand for bluegum leaves in the *Nilgiris* by the Railway authorities and to the extension of the lease system.

*By purchasers—Major produce.*—The increase was chiefly due to extensive sales of tree growth on darkhast lands especially in *Mangalore North*. *Minor produce—Bamboos.*—The increase was mainly in *Central* and *South Coimbatore* and was due to larger areas leased out during the year. *Grazing.*—The revenue realized was Rs. 1,00,575 against Rs. 79,320 in the previous year and the increase is explained in paragraph 40 infra. The number of cattle licensed to grazing on payment was 385,912 against 362,917 in the previous year. *Other produce.*—The value of produce collected was Rs. 57,482 against Rs. 58,048 in the previous year. The difference is small. *By right-holders.*—The increase in the quantity of timber removed was due to causes given in paragraph 144 supra. *By free-grantees.*—The variations are not important.

## CHAPTER III—FINANCIAL RESULTS

149. The financial results compared with those of last year and the average of the five preceding years show a net increase of Rs. 95,965 and Rs. 1,78,565 respectively :— *Northern Circle.*

| Items. | 1916-17. | 1915-16. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. .. .. | 8,44,712 | 7,44,905 | 7,81,580 |
| Expenditure— | | | |
| "A. Conservancy and Works" inclusive of "Refunds" .. | 2,76,651 | 2,90,501 | 4,06,556 |
| "B. Establishments" .. .. .. .. .. .. | 3,99,333 | 3,81,641 | 3,84,861 |
| Total expenditure .. | 6,75,984 | 6,72,142 | 7,91,417 |
| Net results .. | + 1,68,728 | + 72,763 | — 9,837 |

The gross receipts exceeded those of the previous year and the average by Rs. 99,807 and Rs. 63,132, respectively.

The expenditure under A. "Conservancy and works" including "Refunds" is less than that of the previous year and the average by Rs. 13,850 and Rs. 1,29,905, respectively. This is chiefly due to the fact that contract working has been introduced where practicable and to the curtailment of expenditure on capital works on account of financial stringency.

About 34 per cent of the expenditure was devoted to the upkeep and improvement of the forests and 66 per cent to exploitation, etc.

The outstanding revenue at the commencement of the year was Rs. 1,05,082 and the value of the sales amounted to Rs. 9,81,318. Out of the total of Rs. 10,86,400, Rs. 8,44,711 were collected, leaving an outstanding balance of Rs. 2,41,689.

### Receipts.

(i) *By departmental agency.*

*Timber.* — Rs. 16,298 due to the transfer to contractors of the removal of timber from certain unreserves in *Ganjām* and to departmental sale of timber in the unreserves in *Gōdāvari Upper* not having been held for want of bidders.

*Fuel.* — Rs. 9,207 due to less departmental operations in *Vizagapatam*, *Kurnool South* and *West* than in the previous year.

*Bamboos.* — Rs. 2,031 due to leasing out of bamboo coupes in *Vizagapatam* to contractors.

*Minor produce.* + Rs. 591. The increase is small and calls for no remarks.

(ii) *By purchasers.*

*Timber.* — Rs. 21,414 due to lack of demand for unreserve sal timber in *Ganjām* at the revised indent system rate, to less revenue in *Vizagapatam* from tree-growth on darkhast lands than was anticipated and to departmental working in the Chelama range, *Kurnool South*, for lack of proper bids.

*Fuel.* + Rs. 1,28,064 due to special demand for tent pegs in *Gōdāvari Lower* for munition purposes and to sale of the Kanukollu, Allinagaram and Malleswaram reserves in *Kistna.*

*Bamboos.* + Rs. 8,650 due to leasing out of more coupes in *Vizagapatam* than in the previous year, and to better prices for coupes in *Kistna*, *Kurnool South* and *West.*

*Grazing and fodder grass.* + Rs. 3,397 due to better supervision in *Ganjām* and *Kurnool East* and to increased provision made for grazing in the Giddalore and Owk ranges, *Kurnool South.*

*Other produce.* + Rs. 9,099 due to collection of a portion of the Rela bark lease amount in *Vizagapatam* during the year and to non-distribution of tree-owner's fees to other departments in *Gōdāvari Lower* and *Kistna.*

(iii) *Miscellaneous (including confiscated drift and waif-wood.)*

*Revenue.* — Rs. 1,044. These are fluctuating items.

EXPENDITURE.

*A. Conservancy and Works.*

The total expenditure was less than that of the previous year by Rs. 37,326 due to the introduction of contract system on a larger scale and to economy effected in expenditure on capital works on account of war.

*B. Establishment.*

The increase of Rs. 17,692 was chiefly due to the posting of an Assistant Conservator to *Ganjām* to debiting the pay and travelling allowance of the Special Forest Officer of the *Golgonda* and *Hill Madgole* to this Circle, to an Imperial Officer having been in charge of the *Gōdāvari Upper* Division during the whole year, and to the entertainment of special establishment in *Gōdāvari Lower* in connection with Rampa.

*Central Circle.*

150. The following abstract compares the financial position of the year under report with that of the previous year and the average of the preceding quinquennium :—

| — | 1916-17. | 1915-16. | Average of preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. | 14,36,286 | 11,80,976 | 11,28,924 |
| *Expenditure.* | | | |
| A.—Conservancy and works including refunds. | 2,16,874 | 1,95,479 | 3,16,699 |
| B.—Establishments .. .. .. .. | 3,91,803 | 3,81,218 | 3,76,754 |
| Total of A and B .. | 6,08,677 | 5,76,697 | 6,93,453 |
| Net results .. | + 8,27,609 | + 6,04,279 | + 4,35,471 |

The net results show a surplus of Rs. 8,27,609 against one of Rs. 6,04,279 in the previous year and Rs. 4,35,471, the quinquennial average. The figure is the highest on record ever obtained for the Central Circle, but it must not be taken as indicative of a sound forest administration, for in the Conservator's opinion such a high net revenue can be justified only as a war measure under the existing circumstances. The department may literally be said to be starved of trained establishment, and with regard to expenditure on other items the orders of Government laid down in Memorandum No. 7437-1, Financial (Confidential), dated 26th October 1915, have been very strictly and closely carried out.

The revenue increased by Rs. 2,55,310 and the expenditure by Rs. 31,980. Of the receipts 18 per cent were realized from major produce, 22 per cent from grass and grazing, 44 per cent from minor produce and 16 per cent from miscellaneous items.

If the real progress in the forest administration of each district is to be only gauged by the revenue derived, the figures in most cases will, as the Collector of Guntūr has rightly pointed out in his endorsement when forwarding the annual report of his district, be altogether illusory. Guntūr shows a gross revenue of Rs. 2,82,445 against an expenditure under "A. Conservancy and Works" of Rs. 15,391 and under "B. Establishment" of Rs. 35,055, yet Guntūr district is undoubtedly the most backward district of this circle so far as really sound forest administration is concerned. Similarly, the backward districts of Bellary and Anantapur give the enormous revenues of Rs. 1,86,863 and Rs. 3,48,265, respectively, against expenditures under A and B as noted below:—

| | A. Conservancy and Works. | B. Establishment. |
|---|---|---|
| | RS. | RS. |
| Bellary ... ... ... ... ... | 23,064 | 46,762 |
| Anantapur ... ... ... ... | 17,277 | 34,513 |

Comparing with the above the figures obtained in the South Cuddapah Forest division, which is at the present moment by far the most advanced district of the circle in the matter of real forest administration and which together with the other two Cuddapah divisions undoubtedly contain the most valuable forests of the circle, it is found that the revenue realized during the year was Rs. 95,432, against an expenditure of Rs. 34,793, and Rs. 50,778 under "A. Conservancy and Works" and "B. Establishment," respectively, but it is also to be observed that a much larger proportion of the revenue realized in this district is derived from major produce than is the case with Anantapur, Bellary and Guntūr, and this fact should and does indicate in the present case that the forests therein have commenced to be developed and more intensively worked on scientific sylvicultural lines. Of the expenditure in the whole circle about 41 per cent was devoted to the upkeep and improvement of the forests and 59 per cent to exploitation, etc. The outstanding revenue at the close of the year was Rs. 5,41,992, of which Rs. 8,151 fell due within the year. The estimated value of timber and other produce at sale depots at the close of the year was Rs. 3,745 against Rs. 1,049 at the commencement of the year. The important variations between the actuals of the year and those of the previous year are explained below:—

RECEIPTS.

(i) *By departmental agency.*

| | RS. |
|---|---|
| *Timber* ... ... ... ... | — 278 |
| *Fuel* ... ... ... ... | + 3,414 |
| *Bamboos* ... ... ... ... | — 10 |
| *Sandalwood* ... ... ... ... | — 114 |
| *Minor forest produce* ... ... | + 4,091 |

The variations under all heads except minor forest produce are small. Under minor forest produce the increase was due to larger collection of soapnut and nux vomica and to better prices realized for them in *Nellore*.

(ii) *By purchasers.*

| | RS. |
|---|---|
| *Timber* ... ... ... ... | + 2,741 |
| *Fuel* ... ... ... ... | — 25,682 |
| *Bamboos* ... ... ... ... | + 6,065 |
| *Grazing* ... ... ... ... | — 6,446 |
| *Minor forest produce* ... ... | + 1,93,383 |

*Timber* + *Rs.* 2,741.—This is a variable head depending as it does chiefly on the revenue derived from the sale of trees on darkhast lands.

*Fuel* — *Rs.* 25,682.—Due to the smaller number of coupes sold owing to want of demand and also to low prices offered for the coupes on account of shortage of railway wagons in *Guntūr* and *Nellore*.

*Bamboos* + *Rs.* 6,065.—Due to better prices obtained for bamboo blocks in *South Cuddapah* and *Chittoor*.

*Grazing* — *Rs.* 6,446.—Due to less amount realized by handing over reserves to panchayats and to closure of reserves to goat browsing in *Bellary* and to the exclusion of goats from all reserves and sheep from certain reserves in *Guntūr*, and to the collection in June last a portion of this year's grazing fees in *Chittoor*.

*Minor forest produce* + *Rs.* 1,93,383.—Due to sales in all districts of rela bark not sold in the previous five years and to better prices realized for tangedu leases in all the districts.

(iii) *Miscellaneous (including confiscated drift and waif wood)*.

+ *Rs.* 78,156.—The sale of forest lands with tree growth in *Guntūr* and *Chingleput* contributed to the increase.

EXPENDITURE.

*A. Conservancy and Works.*

+ *Rs.* 18,300.—The increase in expenditure is due to payment of large sum of Rs. 11,081 as compensation to Putlampalli shrotriyamdar in *West Cuddapah* and to survey operations carried on by Survey of India Party in *Nellore*.

*B. Establishment.*

+ *Rs.* 10,585.—Due to the posting of an Extra Deputy Conservator of Forests to the charge of *Anantapur* which was held last year by an Extra Assistant Conservator of Forests, to the increments paid under the time scale of pay, to the posting of an Assistant Conservator to the circle, to the disbursement of leave allowances to an Extra Assistant Conservator of Forests attached to Southern Circle and to charges incurred on account of the creation of the appointment of Temporary Assistant to the Forest Commissioner.

*Southern Circle.*

151. The following abstract compares the financial position of the year under report with that of the previous year and the average of the preceding quinquennium:—

| | 1916-17. | 1915-16. | Average of the preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 14,06,096 | 10,40,794 | 12,75,454 |
| Expenditure— | | | |
| A. Conservancy and Works (including refunds). | 2,39,252 | 2,09,604 | 2,87,937 |
| B. Establishment .. .. | 4,00,517 | 3,70,506 | 3,69,010 |
| Total expenditure .. | 6,39,769 | 5,80,110 | 6,56,947 |
| Surplus .. | 7,66,327 | 4,60,684 | 6,18,507 |

The gross receipts of the year exceeded those of the previous year by Rs. 3,65,302 and the expenditure by Rs. 59,659. The net results show a surplus of Rs. 7,66,327. This large surplus, though useful at the present time, can hardly be regarded with satisfaction. Work is steadily increasing whilst establishment is being kept to its lowest point with the result that the necessary works of improvement cannot be carried out. Of the receipts 58·2 per cent was from major produce, 35·9 per cent from minor produce and 5·9 per cent from miscellaneous sources. 5·8 per cent of the expenditure was spent on exploitation, 41·3 per cent on the upkeep and improvement of the forests and 52·9 per cent on miscellanous items. The proportion of net to gross revenue increased from 44 per cent to 54·5 per cent. The outstanding revenue at the close of the year was Rs. 4,17,683, of which Rs. 27,512 fell due within the year. The estimated value of timber and other produce at the sale depots at the close of the year was Rs. 1,69,461 against Rs. 52,114 at the commencement of the year.

## Receipts.

The important variations between the actuals of the year under report and those of the previous year are explained below :—

(i) *By departmental agency.*

*Sandalwood* + *Rs.* 2,39,934.—Due to the increased quantity collected and exceptional prices obtained.

(ii) *By purchasers.*

*Timber* — *Rs.* 2,626.—This is a fluctuating item.

*Fuel* + *Rs.* 1,25,400.—Due to the sale of trees blown down by cyclone in the three divisions of North Arcot district, to the sale of growth in class IV and VI forests of South Arcot and Trichinopoly and to the good sales of coupes in Tinnevelly.

*Bamboos* — *Rs.* 17,064.—Due to the instalments having been collected in advance during the previous year in South Vellore and South Salem. In South Salem, the rotation of bamboo blocks in five working circles was increased from three to four years, in consequence of which only three-fourths of the areas were leased for the triennium commencing from 1st April 1916.

*Grazing* — *Rs.* 904.—Does not call for any remarks.

*Minor produce* + *Rs.* 25,609.—Due to better prices realized and to the collection of three-fourths of the total amount during the year in North Salem on account of two year's leases.

(iii) *Miscellaneous (including confiscated drift and waif wood).*

— *Rs.* 5,440.—Due to a smaller number of cases detected or compounded during the year chiefly in South Arcot and Madura.

## Expenditure.

### *A. Conservancy and Works.*

There was an increase of Rs. 35,508 under A. Conservancy and Works over that of the previous year. There was an increase under A-I (*d*) and A-VII (*a*). The increase under A-I (*d*) corresponds to the remarkable increase of revenue under the head of Revenue I (*d*). The increase under A-VII (*a*) was due to the Forest Engineer's expenditure on roads having been met from Forest funds.

### *B. Establishment.*

The expenditure increased from Rs. 3,70,506 to Rs. 4,00,517 due chiefly to the debiting of the Forest Engineer's salary to Forest funds, the employment of an Extra Assistant Conservator on special duty throughout the year and to the increased establishment for sandalwood operations.

152. The following abstract compares the financial position of the year with that of the previous year and the average of the preceding quinquennium :—

| — | 1916–17. | 1915–16. | Average of the previous quinquennium. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 10,91,922 | 9,71,800 | 8,84,516 |
| Expenditure— | | | |
| Refunds .. .. .. .. | 2,837 | 2,683 | 4,282 |
| A. Conservancy and Works .. | 4,53,112 | 3,98,094 | 4,57,374 |
| B. Establishments .. .. .. | 4,03,995 | 3,73,794 | 3,64,838 |
| Total expenditure .. | 8,59,944 | 7,74,571 * | 8,26,494 |
| Surplus .. | 2,31,978 | 1,97,229 | 58,022 |

* Excludes Rs. 1,144 under "A. Conservancy and Works" and Rs. 3,285 under "B. Establishment" incurred by the Working-plans Officer in June 1916, which relate to the Southern Circle.

The surplus was the highest on record in this circle. Of the receipts, 63 per cent were realized from major produce, 10 per cent from minor produce, 9 per cent from grass and grazing and the balance 18 per cent from miscellaneous items. Twenty-eight per cent of the expenditure was devoted to the exploitation of forests, 39 per cent to their upkeep and improvement and 33 per cent to miscellaneous items. The revenue outstanding at the close of the year was Rs. 1,75,029, of which Rs. 78,739 fell due within the year. The increase in the overdue outstandings was due chiefly to defaulting purchasers of timber sold in *North Malabar* and *South Coimbatore*. The estimated value of the produce in sale depots at the end of the year was Rs. 1,52,419 against Rs. 68,147 at its commencement due to the same cause. The important variations between the actuals of the year and those of the preceding year are explained below :—

RECEIPTS.

(i) *By departmental agency.*

*Timber* + *Rs.* 34,867.—The increase was contributed by *South Coimbatore* and *South Malabar* due to larger sales of accumulated timber to the public and the Ordnance department in the former and to a larger outturn from thinnings of teak plantations and better prices realized in the latter division. The increase would have been greater but for the non-realization of sale amounts of timber in *North Malabar*.

*Fuel* + *Rs.* 5,917.—Due chiefly to larger supply and increased rates realized in *the Nilgiris*.

*Bamboos* — *Rs.* 5,459.—Due to stoppage of departmental extraction in *North Malabar* and to low prices realized in *South Malabar* owing to the predominance of bamboos from private sources and to a smaller number of bamboos used for rafting.

*Sandalwood* + *Rs.* 1,109.—Calls for no special remarks.

*Minor produce* — *Rs.* 17,537.—Due chiefly to the non-sale of catechu in *Mangalore North* for want of good offers, and to the extension of contract system in *Kollegal* and *North Coimbatore*.

(ii) *By purchasers.*

*Timber* + *Rs.* 45,530.—Due to introduction of increased rates for trees on darkhast lands in the *Manyalore* divisions, to the collection of arrears in *North Malabar* and to increased revenue by sale of trees on darkhast lands in *North Coimbatore*.

*Fuel* + *Rs.* 31,019.—Due to better prices realized for coupes.

*Bamboos* + *Rs.* 5,702.—Due to increased demand for construction of plague camps in *Kollegal* and leasing of larger areas in *Central* and *South Coimbatore*.

*Grazing* + *Rs.* 21,253.—Due chiefly to the doubling of grazing fees in *North Coimbatore* as a punitive measure for incendiarism.

*Minor produce* — *Rs.* 94.—Calls for no remarks.

(iii) *Miscellaneous (including confiscated drift and waif wood).*

— *Rs.* 2,185.—Due chiefly to a smaller amount realized by sale of elephants.

EXPENDITURE.

*A. Conservancy and Works* + *Rs.* 55,018.—The chief causes which contributed to the increase were the large demand for fuel from the war establishments in *The Nilgiris*, the payment of arrear rents for the leased forests in *South Malabar*, the special demarcation of district and forest boundaries in *The Nilgirs*, the payment of supplemental compensation for the lands acquired in the Attapadi forests in *Central Coimbatore*, the special survey of the Nilambur teak plantations by the Survey of India Party, and the preparation of the working-plan for the Tekadi leased forests in *South Coimbatore*.

*B. Establishment* + *Rs.* 30,201.—The increase was due to the debit of the pay of two probationers for the Provincial service, to the bifurcation of the *South Kanara* district and the posting of the special working-plans staff to the circle.

# CHAPTER IV.—RESEARCH AND EXPERIMENTS.

## RESEARCH.

153. In *Ganjām* an attempt is being made to see if sal (*Shorea robusta*) can be used for cask staves; here too experimental plots have been laid out with a view to determine when to carry out thinnings in sal coppice, and, whether in cleared strips natural seeding could be relied on or artificial help must be afforded. It is too early to report any results yet. Sample areas were also laid out and measured up with a view to determining the rates of growth of sal trees in untended, lightly, moderately and heavily thinned crops. *Northern Circle.*

*Lac culture.*—In *Kurnool West* arrangements were made in 1916 with the Esociet, Maihar, to supply brood lac in October for inoculation of *Butea frondosa* and *Zizyphus xylopyra* trees. Unfortunately it proved an absolute failure as the consignment was wrongly despatched by the East Indian Railway to *Karnal* in Northern India and by the time it reached *Kurnool* the new brood had swarmed. The experiment was repeated just after the close of the year and promises to be very successful.

*Prevention of creeper coppice by painting the stump with whitewash.*—A very large number of creepers referred to a large number of species in the aggregate have been dealt with with no appreciable result. The experiment is being continued with the addition of sulphur in one or two places.

## EXPERIMENTS.

154. *Sandal—Gōdāvari Lower.*—Large quantities of seed were dibbled in various reserves, but very few germinated yet. There is no doubt from previous experience in this district that germination may continue up to at least three years. The old plants are in good condition. In other districts some seed was put out in the Napier's Park reserve at Chatrapur in *Ganjām* under *Pterocarpus santalinus* (locally exotic) and *Carissa carandas* bushes. Only 33 plants survived. The trees already in the *Kistna* (Kondapalli reserve), *Vizagapatam* (Nathavaram, Kristnadevipeta, Kondasantha and Golgonda) and in the *Kurnools* continue to do well. An attempt at transplanting in the *Vizagapatam* district was a failure.

Mahogany, Red Sanders, Logwood, Divi-Divi, Hevea, Loquat, Lichi Mango, Apple introduced in small quantities in various districts have done fairly. *Pinus longifolia* is proving a failure in *Vizagaptam* and the edible dates in *Upper Gōdāvari* though alive show no sign of fruiting.

*Pouteria suavis* is not a success in *Ganjām*. It remains to be seen if it will stand the climate at all.

*Ceara* will reproduce itself naturally in *Ganjām*.

*Teak.*—The growth of teak trees in the Kondapalli reserve, *Kistna* district, is poor.

155. *Bellary.*—Nothing was sown or planted in the Moka plantation during the year. The height of the older trees ranges from 20 to 30 feet with 3 feet to 4 feet girth. In the older plantation casuarina is generally dying. Acacia arabica in the Moka plantation is thriving well and it is said that the soil suits it. The seedlings sown in Banavasi reserve have grown into saplings varying in height from 8 feet to 18 feet with 6 inches to 1 foot girth. The seedlings sown in 300 acres of black cotton soil in Badanehal reserve have grown to a height varying from 10 to 14 feet. There was failure in about 100 acres though the area was re-sown in 1916–17, the reason given being that the soil is saline. Seven-hundred and sixty-five acres of black cotton soil of Halharvi reserve were leased out to ryots for cultivation in 1910–11. A fair crop of Melia indica and Acacia arabica has come up over the whole area though there were failures here and there over 60 acres. This work has since been abandoned. The Imperial Sylviculturist from Dehra Dun visited Banavasi and other places during the year. *Central Circle.*

*Anantapur.*—Nil.

*Guntūr.*—No experiments were made during the year.

*North Cuddapah.*—The sowing of sandalwood seed near Marrikatava in Lankamalais of Sidhout range proved a failure. One and a half seers of sandalwood seeds were dibbled in near Vaneshwaram. Only two seedlings are reported to be surviving and the rest died. One is 2½ feet and the other about 1 foot high.

*South Cuddapah.*—The eucalyptus trees at Mogilipenta in Balapalle range are reported to be doing well. The existing Mahogani and Macrophylla plants are alive, but the rate of growth is very slow. The three sandal plants near the forest guard's quarters at Thummalabylu in Rajampet range are doing well.

During the year Mr. Edward Marsden, the Imperial Sylviculturist, from Dehra Dun visited the division and laid out three sets of sample and experimental plots—

(1) A sample plot in the Kodur red-sanders plantation in order to determine the girth increment and development of heavily thinned red-sanders plantations.

(2) An experimental plot in the same plantation, for the purpose of determining the conditions best suited for natural regeneration of red-sanders.

(3) Two experimental plots in the first timber improvement felling coupe worked under the present system at Kodivengammabhavi, in order to determine (*a*) the volume increment and development of coppice with standard red-sanders crop and (*b*) the effect of thinning the clumps of red-sanders coppice shoots upon the girth and height growths of the coppice shoots. The results of these experiments will be awaited and watched with much interest.

*West Cuddapah.*—There is little of interest to report. The growth of eucalyptus trees at Kortimadugu in Sanipaya range is not satisfactory. No new experiments were undertaken during the year.

During the year 2 maunds and 34 seers of red-sanders wood were sent to the Director of Industries, United Provinces, Cawnpore, for experiment with regard to the dye known as "Santalin" and he declared the result to be as follows: "The wood has been examined in the laboratory attached to this department and found to be of good quality, but as the dye-principle is insoluble in water and gives dull red to brown shades, its utility is very limited. It is of interest only to wool-dyers who do not care to use it in preference to majith which is now obtainable in these parts in sufficient quantities."

*Nellore.*—No experiments during the year.

*Chingleput.*—At the instance of Mr. A. W. Lushington, C.I.E., Temporary Assistant to the Forest Commissioner, a piece of Euphorbia 4′ long and 6″ diameter was cut at the trunk in Paranur reserved forest, its bark was at once removed and the post was kept under water for about 12 days and then dried in the shade. The wood was sent to Mr. C. A. Innes, I.C.S., Director of Industries, Madras, to try and find out if it would be useful for pencil manufacture. The result of the experiment is awaited. Experiments for the destruction of growth of creepers in Guindy Park were tried by cutting back stems of one hundred creepers of Zizyphus Œnoplia, Toddalia aculeata, Capparis horrida and painting them with a solution of lime but they proved a failure.

Two varieties of myrabolams from Kambakkam and Nagalapuram reserves were sent to Forest Economist, Dehra Dun, for chemical analysis and to report on their value as tanning material as they were rejected by local tanneries. The Economist declared the quality to be the poorest he ever saw.

*Chittoor.*—Swietenia Mahogani plants in Palmaner and Horsleykonda and Eucalyptus Globulus trees in Nagamangalam and Mudivaripalle topes are reported to be doing fairly well. There were no new experiments conducted during the year.

### 1. *Sandal.*

*Southern Circle.*

156. The most important research work carried out during the year was in connection with sandal which plays such a prominent part in this circle.

(*a*) *The effect of girdling.*—(1) Although deeply girdled four out of the six trees experimented upon took nearly three years to die.

(2) By girdling the white sapwood between the bark and the heartwood has assumed a greyish brown appearance which may be mistaken for heartwood, but this wood contains no scent.

(3) Apparently the heartwood is not increased by girdling.

(4) The slow drying of the heartwood caused by girdling gives it a greater freedom from cracks than in the case where wood is taken from a dying tree, but girdled wood is by no means free from cracks.

These results were obtained from experiments in South Vellore but are not conclusive. They are being continued over a large number of trees.

(*b*) *Is sandal an obligate root parasite.*—In South Vellore six trees have been entrenched, one in February 1916 and five in August 1916. Every green weed is removed from the platform immediately it appears and the platforms are kept scrupulously clean except for young sandal seedlings which spring up from time to time.

A special register is kept for noting observations on the health of each tree and, as the experiment is being conducted at Komattiyeri in South Vellore, the Principal of the Forest College is able to watch the experiment as well as the Conservator. Up to date there is no apparent sign of weakness in any of the trees.

Closely connected with the same subject is an experiment being carried on at Andiappanur in West Vellore. The object of these experiments was to see if anything resembling spike could be produced by cutting off some of the haustoria and poisoning the root by injections of sulphuric acid. Unfortunately the date on which these operations were carried out has not been reported. The trees experimented upon have not as yet shown any signs of abnormality.

(*c*) *Rate of growth.*—From an examination of billets selected haphazard from the Vellore depot there did not appear to be any difficulty in making out the rings. In exceptional cases these were not as clear as others. The observation will be made on a larger scale.

In the meanwhile measurements over a considerable number of trees in the "special tending" areas are being carried out and carefully recorded both in the South and West Vellore divisions.

(*d*) *The production of root suckers.*—In cutting the trenches referred to under (*b*) it was noticed that vigorous root suckers were produced and this phenomenon is very apparent in almost every sandal forest in the Presidency. In order to see if this method of reproduction could be utilised a sample plot was demarcated with a trench $1\frac{1}{2}$ feet to 2 feet deep and 2 feet wide. By the end of the year a line of vigorous root suckers has been produced with apparently no deleterious effect upon the mother trees. This method of reproduction will probably be utilised in future when dying trees are extracted. A trench will be cut at some distance from the tree before the actual uprootal takes place.

(*e*) *Spike disease.*—Considerable progress has been made in the investigation of this disease. Dr. Coleman's valuable pamphlet was published during the year which has proved that the disease can be successfully grafted on to a sound tree, but his experiments have gone further than this in showing that the disease in Zizyphus œnoplia, Stachytarpheta and Vinca is either the same or very similar and can be produced by grafting.

Mr. Hearsey, who has been carrying out field experiments during the year, has added considerably to our knowledge in this direction. He has shown that, in all the forests where the disease is prevalent, there is an abundance of sucking insects which increase with remarkable rapidity. These sucking insects which are known to be most injurious to crops, orange groves, orchards, etc., are now placed under suspicion.

The chief of them are the following :—

(1) Red Spider (a small arachnid).
(2) Monophlebus.
(3) Icerya (2 species).
(4) Psyllidae.

The last named are known to produce a spike-like form of growth in a species of Indigo, in Cassia Fistula and Albizzia Lebbek. The Red Spider seems to be closely connected with the spike-like growth in Zizyphus œonplia, Dodonaea Viscosa, Scutia Indica, Argyreia cuneata and other species and Dr. Coleman has been able to verify the fact that there is excess of starch in the specimens of Dodonaea and

Scutia which were sent to him. This excess of starch is one of the characteristics of spike in sandal. Experimenting with the Monophlepus and Icerya under cages, Mr. Hearsey has not been able to produce spike as yet, but has apparently killed or nearly killed healthy saplings.

Incidentally it may be mentioned that the damage done to orange groves in California by the Red Spider is well known, whilst the ravages of the Icerya in Egypt were so great that the one specimen introduced into England was immediately killed after it had been described.

Apart from his observations on insects, Mr. Hearsey has given us a good deal of information concerning what are believed to be the early stages of spike. In the spiked areas he has found abnormality of leaf, abnormality of flowers and what is believed to be an early stage of the disease which has been called 'lanky spike.' This 'lanky spike' has neither excess of starch nor the 'bunching' of leaf which are the known characters of spike but, in places so wide apart as Tholuvabetta in North Salem and Nellivasal in the Javadis of West Vellore, lanky spike has been found in conjunction with the better known form of spike. Another species which exhibits both forms is the Dodonaea Viscosa and in this case excess of starch is apparent in both. Finally Mr. Hearsey's list of species attacked by spike-like growth now amounts to well over 40 and observations tend to show that almost every associate of sandal is attacked with the disease, though the disease is not so fatal with species other than sandal.

(2) *Other root parasites.*

157. Observations on the root parasitism of Ximenia Americana found growing in the Javadis of South Vellore have been made and specimens sent to the Coimbatore Museum.

Similar observations and collections of specimens have been made of the haustoria of Anocolosa densiflora, the giant root parasite of the ever-green forests of Tinnevelly.

(3) *Thinnings on coppice shoots.*

158. Three years ago a sample plot was laid out in Mundanthorai in the Tinnevelly district where the thinning of coppice in a three year old coupe was carried out. The number of shoots was reduced to 2 or 1 per stump. After three years the results tend to show that the unthinned stools are better than those which have been thinned.

Similar experiments have been started in Madura more recently, the species placed under observation being the Albizzia Amara.

(4) *Thinning of bamboo clumps.*

159. These have been carried out for some years in Tinnevelly. At first it was thought that the results would be harmful. More recent observations tend to show that the number of new culms produced on the thinned clumps is larger than those on the unthinned and that working becomes much easier. When a big clump is heavily thinned, there is undoubtedly a tendency for the remaining culms to become bent.

Further observations are being conducted in Ambur in *North Vellore*, the Javadis of *South Vellore*, and Belur Reserve in *South Salem*.

(5) *Hardwickia Binata.*

160. The tendency of this species to form a bush for some years and only to grow in height after several years is well known. Experiments were carried out in the Pichanur tope in North Vellore to test the effect of pruning the lower branches. The District Forest Officer now reports that the results show conclusively that the seedlings put on markedly rapid height growth when pruned. A similar observation has been made on Pterocarpus santalinus in Banavaram Reserve and these experiments may well be carried out on a larger scale in the natural forests of these species.

(6) *The regeneration of evergreen forests.*

161. Experiments have been carried out for the past seven years in opening out lines in the evergreen and sowing or planting Hopea Parviflora. These have not on the whole proved a success though in Kannikatti in Tinnevelly some well established plants have been raised. It is thought that this species like the Sal may require a more thoroughly cleaned soil and less cover. The Hopea, however, is a poor seeder and germination is difficult and possibly the Balanocarpus utilis, a closely allied species with a heavier seed, will give better results.

Capital regeneration of Gluta Travancorica has been secured by opening out the canopy under mother trees. These experiments have only been on a small scale and can now well be extended, dibbling being tried where the reproduction secured is insufficient.

(7) *The destruction of creeper growth.*

162. An experiment was tried in *North Vellore*, *West Vellore*, *South Arcot*, *Trichinopoly*, *South Salem* and *Madura* to destroy creeper growth by painting on a solution of sulphur and lime and in some cases lime alone. Various species were experimented upon but especially Zizyphus Oenoplia. It is universally reported that the painting did not stop the production of shoots which sprung out from the dormant buds below the cut surface. The actual figures for the four ranges of *South Arcot* are given below :—

| | |
|---|---|
| Tindivanam Range— | |
| Number of stumps tried | 621 |
| Number died | 101 |
| Cuddalore Range— | |
| Number of stumps tried | 225 |
| Number died | Nil. |
| Tirukkoyilur Range— | |
| Number of stumps tried | 210 |
| Number died | Nil. |
| Kallakurichi Range— | |
| Number of stumps tried | 160 |
| Number sent out shoots | 132 |

The observations will not be continued.

163. A further consignment of sandalwood from *South Kanara* was sent for analysis to Dehra Dun and the result confirmed the previous dictum that this wood is much the richest in the market. *Western Circle.*

The destruction of creepers by painting with lime was tried in four divisions and failed.

The final report upon the cost of felling and floating bamboos from Nilambur to the coast was submitted to the Board. The report was called for in connexion with Messrs. Nelson's scheme of establishing a paper pulp mill near Beypore. The results are favourable to the project which, it is hoped, will be revived after the war.

Experiments with underplanting the teak plantations at Nilambur with likely species were carried out. The best success was attained with rosewood of which four-fifths of the plants put out survived. Broadcast sowing of *Hopea* failed. The seed of this species retains its vitality for a very short time after its shedding. Another lot was sown at the close of the year as well as 21 bags of *Terminalia paniculata*. The results will be recorded next year.

Teak fuel billets from Nilambur were sent to the Institute of Science, Bangalore, for experiments with dry distillation. The best yield of acetic acid was obtained from the smallest sizes and, in accordance with a further requisition from Dr. Sudborough, 9 cwt. of billets from 1" to 6" diameter have lately been despatched to him.

Barks of the Australian Wattles—*Acacia decurrens* and *Acacia dealbata* from the *Nilgiri* plateau were sent to various tanneries for valuation. Whilst the former, which is scarce, is now acknowledged to be a valuable tanning agent, unfortunately the *dealbata*, which is most common on the hills, was not successful. It is probable however that this variety only awaits the discovery of the proper method of using it.

A small quantity of "cutch" was prepared in *Kollegal* from *Acacia sundra* and sent to Dehra Dun but was found to contain no catechin.

In *North Coimbatore* dibblings with sandal seed soaked for a few hours in kerosine oil as a protection against rats and squirrels was tried as against untreated seed. The District Forest Officer reports that seven months later there was 11 per cent of successful germination from the former, whereas the whole of the untreated seed was apparently destroyed.

## CHAPTER V.—ADMINISTRATION.

*Northern Circle.*

164. *New District Forest charges.*—No new district charges were formed during the year. Proposal to form a fourth division in the *Kurnool* district has been abandoned and the Collector has been requested to formulate proposals for the formation of a subdivision instead.

165. *New ranges.*—There were no changes during the year.

166. *Conduct of establishment.*—The quality of the rangers and deputy rangers varies considerably. Several of the men are quite good, others useless or even worse and the process of elimination goes on steadily. Eleven per cent of this establishment received serious punishments during the year. Special mention may be made of the work of Rangers M.R.Ry. P. Ramunni Menon, V. S. Subrahmanya Ayyar, C. G. Ganapati and N. Sundaresa Ayyar, and Deputy Rangers Aga Mirza Sahib, D. Ramachandra Rao, K. Venkataramayya, T. Qasim Khan and A. K. Sheriff.

*Protective staff.*—The conduct of this branch was unsatisfactory on the whole. One forester was convicted; six forest guards and two watchers were dismissed; two foresters, sixteen forest guards, 44 watchers, eight tannadars and one plantation overseer were removed; nine foresters, 17 forest guards, 11 watchers, six tannadars and one plantation overseer were suspended; two forest guards and one watcher were reduced. It is hoped that a modification of the "Patrol system" as at present in force will have some effect in improving the conditions of service.

*Ministerial staff.*—Its work and conduct are reported to be satisfactory except in *Kurnool East* and *West*, where the Collector remarks "until the scale of pay of clerks in the forest branch is assimilated to that in the general revenue establishment, it must be a matter of difficulty to arrange for the free interchange of establishment." I think the scales in this department were however worked out so as to induce junior clerks to take up appointments on a steady increment which would entitle them to promotion in the general line in the Collector's office and it is possibly the failure to provide promotion elsewhere that is the root of the trouble. There is, of course, more work in the forest office much of which does not appear in correspondence registers.

167. *Health of the establishment and casualties.*—This would appear to be the most malarious circle in the Presidency. The health of the establishment was as usual bad except in *Kistna*. One ranger, one deputy ranger, four foresters and thirteen lower subordinates died. Besides these several men took leave on account of illhealth (malaria).

168. *Relations between revenue and forest officials* continued to be cordial.

169. *Service books* were maintained and verified in all the divisions.

170. *Tours of the Forest Member.*—The Forest Member visited the *Kistna* and *Kurnool* districts during the year.

*Tours of the Conservator.*—Mr. F. L. C. Cowley-Brown was in charge of the circle up to 4th November 1916 when he had to take leave on account of ill-health; he was succeeded by Mr. H. A. Latham. These two officers spent 178 days in camp visiting all the divisions in the circle. All the district forest offices were inspected during the year.

*Inspection of Range offices.*—All the range offices except Nugur and Cherla in *Gōdāvari Upper* and Morricheruvu in *Kurnool East* were inspected by the respective District Forest Officers.

*Audit of accounts of the District Forest offices.*—The accounts of all the district forest offices were audited by the auditors from the Accountant-General's office and the general results were satisfactory.

171. *The Madras Forest College.*—Out of the six students deputed for 1915–17 course, one was sent back as unfit to follow the course, two obtained the higher standard certificates and three the lower standard certificates. Of the six students deputed for 1916–18 course, two were sent back as unfit to follow the course and the rest are undergoing training. Six Government students were deputed for the course commencing from 1st August 1917.

*Vernacular Training school.*—No school was held during the year for want of suitable candidates in the circle.

172. *Work and service of superior officers.*—Imperial and Provincial officers have worked satisfactorily in spite of the shortage of men. Mr. Minchin in Ganjām has worked hard in collecting information for a working plan for the *sāl* in his district; Mr. Madan in East Kurnool seems to have solved the question of how to utilize the Chenchu without dead loss to Government. Mr. Seager has also done well. Mr. Mclaughlin, Extra Assistant Conservator of Forests, retired in February 1917 after a lengthy period of service in the department.

173. Mr. H. B. Bryant was in charge of the circle throughout the year. Consequent on the issue of G.O. No. 260, Revenue, dated 7th February 1916, the Conservator and his office have been given a large amount of additional work without at the same time being given any additional assistance to enable him to efficiently cope with it. The matter has been fully and clearly represented to the Board in this office C. No. 207, dated 18th August 1917, wherein it has been urged that the appointment of a Personal Assistant of the Imperial Forest Service is necessary to the Conservator if good progress and development of the forests of the circle are to be expected. *Central Circle.*

174. *District and range charges.*—The division of Cuddapah district into three district forest charges was given effect to from 1st April 1917. Consequent on this, the old Vempalli range was divided into two ranges, viz., Vempalli and Muddanur, and the old Kodur range into Kodur and Balapalle ranges. The range charges in this district are still far too large and will have to be further subdivided. Five years ago the area which now forms the South Cuddapah Forest division and which follows more or less the boundary of the old Pullampet taluk was merely one single forest range in charge of a single ranger. Development of the forests therein has been so rapid that it now consists of four important range charges under its own District Forest Officer.

In the West Cuddapah division there are now four ranges, but this division is now ripe for development on the same lines as that of the south division, but before attempting such development, it is *essential* to further subdivide the four ranges into six so as to make each range more of a manageable unit than it is at present. The Conservator has already addressed the Collector on the subject under paragraph 5 of the Forest Code and, on receiving his reply, will shortly address the Board.

Speaking generally there is an enormous amount of development necessary and called for in the circle, but with the insufficient and inefficient establishment at the Conservator's disposal, such development is practically impossible.

In Bellary district the Hospet and Sandur ranges were amalgamated into the Hospet range. The division of Tirupati range in Chittoor district into Mamandur and Chamala ranges took effect from 1st October 1916, this being rendered essential because more intensive working in Mamandur range has actually been commenced.

175. *Work of superior officers.*—The reports of Collectors on the work of their District Forest Officers are given below:—

*Mr. Usman Sahib (Anantapur).*—So far as I have been able to judge Mr. A. B. Myers has been discharging his duties satisfactorily.

*Mr. E. A. Davis (Guntūr).*—I am glad to be able to acknowledge the strenuous work which the District Forest Officer Mr. M. Panchapakesa Ayyar has done during the year. He has had the double task of administration and of preparing preliminary working-plans for several important areas and has spared no effort to put forest matters in this district on a better footing.

In addition to the above, Mr. E. A. Davis has in his forwarding endorsement made some valuable remarks concerning the forest administration; with these remarks the Conservator is almost in complete agreement and takes the liberty of attaching a copy of them in full at the end of this report for the perusal of all those who may be interested in the subject. Mr. Davis is, I know personally, well aware that, owing to the extreme paucity of Forest trained establishment, it is practically impossible for the Conservator to take up more than one or two at the most of the districts which comprise the circle in order to make serious attempts to push development and work the forests therein more intensively. Guntūr from sheer force of circumstances is one of those districts which have had to be neglected. The fault does not lie with successive Conservators of the circle but in the false economy which has been practised in the past in not providing an adequate Forest staff for the department.

*Mr. P. C. Dutt (Cuddapah).*—Mr. Saiyid Abdul Qadir was District Forest Officer of North Cuddapah for the last three months of the year. Both Messrs Whitehead and Belliappa of South Cuddapah (old East Cuddapah) are to be commended for their efficient management of these very valuable forests. With experience Mr. Belliappa will turn out a very good Forest officer. Mr. Hafiz is keen on learning his work. Both Messrs. A. Raju Nayakkar and E. V. Padmanabha Pillai who were District Forest Officers of West Cuddapah were keen and intelligent and did all they could to conserve and improve the forests under their charge.

In forwarding the annual report of the South division, the Collector of Cuddapah writes in paragraph 2 of his endorsement as follows:—

"In connexion with the forest village scheme prepared by Mr. Whitehead I inspected some portions of these forests and interviewed many of the ryots. I was singularly struck by the paucity of complaints the people had to make against the forest subordinates: whatever may be the case elsewhere the people here had very few even imaginary complaints against the department."

I quote the above Collector's remark in full, for it is not often that such a satisfactory state of affairs is reported with regard to the department and the people of any locality, and in this particular locality such remark could not have correctly been applied five years ago as it can indeed be now. The reason for this change is not far to seek. It is because real forest administration which is worthy of the name has been established in this division; by "forest administration" is meant the proper and intensive working of the forests for the benefit of the community at large as well as for the local inhabitants, whereby the forest subordinates have definite work apportioned to each of them and by sufficient supervision and control they are made to do it, and the local villagers themselves are largely employed in carrying out forest work and are thus helped to earn a legitimate livelihood instead of supplying as was the case in this very locality a few years ago, many of the most notorious red sanders timber thieves. It is with the object of introducing such forest administration as this in other and more extensive localities in the Presidency that the department has been crying out aloud for more trained forest establishment as yet however in vain. Wherever real forest administration of the kind is introduced and established with sympathetic tact and discretion the complaints against the department real and imaginary will be reduced to a minimum.

In *Nellore* the Collector Mr. C. A. Souter writes:—

"There can be little doubt that the kancha system is a success and for this we are indebted to the interest displayed in it by the late Mr. Arbuthnot whose untimely deathhas been such a loss to the district. Mr. Ramanuja Achari, on special duty, has also assisted materially and it is due to his exertions that the prices realized for kanchas are so good.

"I have nothing to say with regard to the general administratio o the department. I fear, however, that in view of the forest revenue an insufficient sum is expended on the development and working of the forests poor as they are in general."

The Conservator entirely concurs with the above remarks. Mr. H. F. Arbuthnot's death was not only a serious loss to the Nellore district but also to the

department; and undoubtedly it is a fact that it is owing to his untiring zeal and interest in the system that the kancha grazing system has been successfully established in the district and will, it is hoped, show improvement year by year, and in the Conservator's opinion this will certainly take place if the system continues to be properly worked.

*Mr. J. F. Bryant (Chingleput).*—Both Messrs. Gajaraja Mudaliyar and S. V. Deva Dasan worked hard and conscientiously. The Collector is especially pleased with Mr. S. V. Deva Dasan.

176. *Conservator's remarks.*—All the District Forest Officers in the circle have worked hard and done their best, often under very trying circumstances. Severely handicapped as they continue to be by insufficient and inefficient establishment the surprise is that they are able to carry on so well as they do and show such good results. The Conservator desires herein to place on record his appreciation of their work and efforts, and his cordial thanks for the zeal and energy which they have displayed in the execution of their duties often in face of difficulties well calculated to depress and discourage men with less spirit than they have shown.

177. *Executive staff.*—The work and conduct of rangers cannot on the whole be considered satisfactory.

During the year three rangers were dismissed, the services of one dispensed with, one was suspended and subsequently dismissed. Four rangers were reduced, one ranger tendered his resignation and it was accepted. He appealed to Board, and was re-instated and transferred to another circle. This is not a record of which the circle can be proud; and it is to be feared that the delay which has taken place in reorganizing this branch of the service whereby improvement of its prospects has long been hoped and looked for by executive officers has had a good deal to do with the unsatisfactory condition of the staff at the present time. Until reorganization comes the Conservator sees very little prospect of much improvement being obtainable.

178. *Protective staff.*—The conduct of this staff cannot be said to be satisfactory. Among the foresters two were dismissed, three were dispensed with, nine suspended, thirteen reduced and one resigned. Among the guards 9 were dismissed, services of 51 were dispensed with, 51 suspended, 13 reduced and 11 resigned. The present unsatisfactory state is due partly to their poor pay and prospects and partly to the inferiority of rangers under whom they have to work. Reorganization is urgently called for, and the remarks made under the "Executive staff" above are equally applicable here.

179. *Ministerial establishment.*—The work is reported to be satisfactory in all districts except *Bellary* and *Anantapur*. The Conservator considers that there is room for improvement especially in *Nellore*.

180. *Health of establishment and casualties.*—Health of establishment is reported to have been generally good in all districts except *West Cuddapah* where it was very bad. Mr. Arbuthnot, I.F.S., died of appendicitis at Kodaikānal. Three guards died of fever and one clerk of cholera.

181. *Relations between Revenue and Forest officers* were cordial throughout the circle.

182. *Service books* were maintained and verified in all districts.

183. *Touring of the Imperial Sylviculturist from Dehra Dun.*—During the year Mr. Marsden visited a portion of Cuddapah district and reference to his visit has been made in Chapter IV supra.

184. *Conservator's inspection.*—All the district forest offices except *Cuddapah* and *Chittoor* were inspected during the year. Some of the forests of *Bellary*, *Chittoor* and *Chingleput* districts were inspected and inspection notes recorded in B.P. Forest Mis. No. 14 (Confdl. No. 2), dated 10th January 1917, and No. 143, dated 21st October 1916, respectively, with regard to the first two.

185. *Inspection of Range offices.*—All the range offices except Balapalle range of *South Cuddapah*, Muddanur range of *West Cuddapah* and Rapur range of *Nellore* district were inspected.

186. *Audit of accounts of District Forest offices.*—The accounts of all districts for 1915–16 were inspected by the Assistant Inspector of Local Fund Accounts and the general result was satisfactory.

187. *Imperial Forest College, Dehra Dun.*—No one was deputed from this circle during the year.

188. *The Madras Forest College, Coimbatore.*—Six deputy rangers were deputed during the year. One ranger returned with honour's certificate and four with higher standard certificates. The result is satisfactory.

189. *Vernacular Training school.*—The school was held at Chittoor district and 7 foresters and 23 guards underwent training. The school did good work under Instructor M.R.Ry. V. N. Seshagiri Rao and his Assistant S. M. Razvi Sahib. The District Forest Officer took much interest in its management.

*Southern Circle.*

190. The chief administrative feature of this year is the transfer of the land revenue administration of certain Javadi Hill villages in North Arcot district from the Land Revenue to the Forest Department and the appointment of the District Forest Officer, Mr. George Venugopal, as Deputy Collector.

191. *Circle charge.*—Mr. P. M. Lushington held charge of the circle throughout the year.

192. *Divisional charges.*—The bifurcation of the *South Vellore* division into the *South* and *West Vellore* divisions sanctioned last year was given effect to during the year.

The Board has approved of the Conservator's proposal to abolish the Trichinopoly District Forest office and to form a new district attached to Salem as soon as the District Forest Officer divests himself of the plain forests. The reserved forests of Pulanjimalai, Athipakkam and Pavunjipattu were transferred from the *South Arcot* to *South Vellore* division. The Suriyamalai reserve was transferred from *South* to *North Salem.*

193. *Range charges—Madura.*—The Palamedu and Kanavoipatti ranges were converted in May 1917 into the three ranges known as Nattam, Sholavandan and Ayyalur.

194. *Work of superior officers.*—The work of superior officers has been good but some officers have had to devote a considerable amount of their time to their military duties.

Particularly good work has been done by M.R.Ry. K. R. Venkataramana Ayyar Avargal in charge of the South Vellore division.

195. *Executive staff.*—The work and conduct of the Rangers has on the whole been good.

One Ranger was dismissed and two were placed under suspension. The Deputy Rangers as a whole have done fair work, one has been dismissed and one suspended. It is, however, difficult to recruit men who have good educational qualifications and who are at the same time fit for the rough forest life and the probationary period of four men had to be terminated.

196. *Protective staff.*—The work and conduct of the protective staff has as usual not been quite satisfactory. One Forest Guard in Tinnevelly retired from service. There were 233 removals or dismissals, 133 suspensions and 16 reductions in this class.

197. *Ministerial establishment.*—The work of the ministerial establishment is reported to be satisfactory in all the districts except North Salem.

198. *Health of the establishment.*—The health was generally good though the hill ranges of the Javadis, Chitteris, Kalroyans, Pachamalais and Kollimalais are still feared.

The Agricultural Engineering Department engaged in the boring of tube wells on the Javadis have got through very little work as subordinates take leave or resign directly they are sent to the hills.

199. *Casualties.*—Five forest guards, one range clerk, one tannadar and one watcher died of malarial fever. One forest guard and four watchers died of other causes.

200. *Relation between Revenue and Forest officers* continued to be cordial as usual throughout the year.

201. *Service Books* were maintained and verified in all districts.

202. *Conservator's inspection.*—The Conservator was on tour for 165 days. All the districts except South Arcot and Madura were visited and all the District Forest offices except Madura and Trichinopoly inspected. Inspection notes were written for North and South Vellore and for the Pachamalais and Kollimalais of South Salem and Trichinopoly districts. The Conservator inspected the forests around Mundanthorai in Tinnevelly district during the year with the Imperial Sylviculturist, Dehra Dun, and with Mr. A. W. Lushington shortly after the close of the year. Nearly a month was taken up by the inspection of tanneries in Trichinopoly, Salem, Ambur, Gudiyattam and Vellore.

203. *Touring of District Forest officers.*—All the District Forest officers spent more than the prescribed minimum period in camp except the District Forest Officer, Trichinopoly, whose touring was short by one day.

204. *Forest Commissioner's tour.*—The Forest Commissioner toured in Salem, North Arcot and Tinnevelly districts.

205. *Inspection of Range offices and Sale depots.*—All the Range offices except one in North Salem and another in Tinnevelly were inspected. Sale depots were also inspected during the year.

206. *Audit of accounts of District Forest offices.*—The accounts of all the District Forest offices except South Arcot were audited during the year by the Assistant Inspector of Local Fund Accounts and the result was satisfactory.

207. *Madras Forest College, Coimbatore.*—Four Deputy Rangers returned this year from the college with higher standard certificates. Out of two Probationary Rangers and four Deputy Rangers deputed for 1916–1918 course, one Deputy Ranger was sent down being unable to follow the course. Seven Deputy Rangers have been deputed for the 1917–1919 course.

208. *Vernacular Training School.*—The school was held in North Vellore division. Out of 30 students selected for deputation one did not join on account of illhealth and another deserted and was finally removed from service. The remaining 28 students successfully underwent the training. Mr. A. K. Kandan and Mr. T. V. Govinda Rao were appointed as Instructor and Assistant Instructor, respectively, and both showed much energy and interest in their work.

209. Mr. H. A. Latham held charge of the circle up to 27th October 1916 when the permanent Conservator Mr. C. D. McCarthy returned from leave and continued throughout the year. *Western Circle.*

*District and Range charges.*—There were no changes during the year.

*Work and services.*

210. *Superior officers.*—The results of the year in all divisions with the exception of *Kollegal* speak for the enthusiasm, energy and efficiency of all the District Forest Officers who held charge of them. As regards hard work and keenness it would be invidious to select any names for special mention and as regards efficiency both Imperial and Provincial Officers have worked with merit and success up to their respective standards. Messrs. Wood and Bourne had charge of heavy working-plan work in addition to their usual duties.

211. *Executive establishment—Rangers.*—The work of Rangers with a few exceptions is generally well reported on. One Ranger who was incompetent resigned and the services of one acting Ranger were dispensed with. *Deputy Rangers*—On the whole fairly satisfactory. The services of three were dispensed with, one was reverted, one suspended and two resigned.

212. *Protective staff.*—The work and conduct of the staff with a few exceptions among Foresters was by no means satisfactory. *Punishments—Foresters.*—The sevices of one were dispensed with, three were suspended and four reduced. *Guards.*—Dismissals 8, removals from service 7, suspensions 23 and reductions 5.

213. *Ministerial establishment.*—The post of temporary draftsman in the District Forest offices of *South Malabar* and the *Nilgiris* was made permanent, but the order so far as it relates to the former division was not given effect to pending completion of the working-plan for the teak plantations. *Circle office.*—The staff of Circle office have worked well under the control of Mr. Ramanuja Ayyangar whose experience

and keenness is highly commendable. *Divisional offices.*—The work of the establishment was generally satisfactory. But there is room for improvement in all of them. *Range offices.*—The work of the Range establishments in *Mangalore* divisions, the *Nilgiris*, *Kollegal* and *North* and *South Coimbatore* has not been specially referred to; it is reported to be satisfactory in *North Malabar* and *Central Coimbatore* and unsatisfactory in *South Malabar*.

*Punishments—Divisional offices.*—The head clerk of *North Malabar* was suspended and the services of the temporary clerk in the same office were dispensed with. The draftsman of the *North Coimbatore* office who was incompetent resigned. *Range offices.*—One Range clerk in *Kollegal* was dismissed, the services of one in each of *Mangalore South* and *South Coimbatore* were dispensed with and two clerks in *Central Coimbatore* were suspended.

214. *Health of the establishment and casualties.*—The health of the establishment was fair in *Mangalore* divisions except at foot of the ghats where malaria was, as usual, prevalent and bad elsewhere except on the *Nilgiri* plateau. A large number of subordinates have had to be granted sick leave. *Casualties.*—Two Rangers and one guard retired; two Rangers were invalided. There were four deaths in the *Nilgiris*, five in *Kollegal*, three in *North Coimbatore*, two in *Central Coimbatore* and one in each of *South Malabar* and *South Coimbatore*.

215. *Relations between Revenue and Forest officers.*—The relations continued to be cordial. The District Forest Officer, *Central Coimbatore* and one of the Range officers in *Kollegal* attended the Jamabandi. Such attendance was not as usual, required in *Malabar* and was not carried out in the other districts. No matters of importance were brought to the notice of the Jamabandi officers.

216. *Service books.*—Maintained and verified up to the close of the financial year.

217. *Tours of the Forest Member.*—The Forest Member toured in *Central* and *South Coimbatore* and in the *Nilgiris*.

218. *Conservator's inspection.*—All the District Forest offices except *Kollegal* were inspected with fairly satisfactory results except as regards *Central Coimbatore* which was in very bad order. The forests of *Mangalore North*, *North* and *Central Coimbatore* and parts of the *Nilgiris* and *South Coimbatore* were also inspected. The number of days spent in camp was 196.

219. *Touring of District Forest Officers.*—With the exception of the District Forest Officer, *South Malabar*, all the others spent in camp more than the minimum period of touring prescribed. The short touring in *South Malabar* is due to the greater part of his working-plan work—stock mapping of plantations and timber operations, etc.,—lying within the five-mile radius of his headquarters.

220. *Audit of accounts of District Forest offices.*—The accounts of all the offices were audited by the Local Fund Audit staff. The Assistant Accountant-General inspected also the accounts of *North* and *South Malabar*, the *Nilgiris*, *North* and *South Coimbatore*. The results are reported to be satisfactory.

221. *Inspection of Range offices.*—All the Range offices were inspected with generally satisfactory results except two in *Central Coimbatore* and one in *South Coimbatore*. With the exception of the Topslip depot in *South Coimbatore* all depots were inspected. The results of the inspection of four depots in *South Coimbatore* were not satisfactory; the other depots in the circle were in good order.

222. *The Madras Forest College, Coimbatore.*—Two probationary Rangers and two Deputy Rangers passed the course with higher standard certificates. One probationary Ranger and five Deputy Rangers were deputed for the 1916–18 course; one of the Deputy Rangers was sent back on account of illhealth.

223. *The Imperial Forest Research Institute and College.*—One probationer for the Provincial service was deputed for training and three probationers returned to this circle after successfully passing the course.

224. *The Vernacular Training School.*—Of the 27 students remaining at the end of the last session held in *North Coimbatore*, five secured first class and 22 second class certificates. The work of eight students was unsatisfactory. This year's session was held in *South Coimbatore* and subordinates from the *Nilgiris*, *Kollegal* and *North Coimbatore* were also deputed for training. The strength of the school at its start was 11. Owing to the smaller number only one Instructor was employed.

## CHAPTER VI.—GENERAL.

### (*a*) RULES UNDER THE FOREST ACT.

225. *Timber transit rules.*—(i) The rules are reported to have worked satisfactorily in all the divisions. The rules of the *Vizagapatam* division were amended during the year and the issue of way permit in Form No. IV was introduced. The timber transit rules in Yerramalais introduced in 1914-15 were cancelled as they were considered to be unduly irksome and also illegal. *Northern Circle.*

(ii) *Rules under section 26 of the Forest Act*—have worked satisfactorily and there was no complaint or abuse reported except in Buguda range, *Ganjām* district, where the ryots have been cutting classified trees in unreserves.

(iii) *Rules framed for the collection and disposal of driftwood.*—The revised rules introduced last year are reported to have worked well.

(iv) *Rules for the guidance of Forest officers in compounding forest offences.*—These rules worked smoothly and well in all the divisions.

(v) *Rules framed under the Forest Act for private forests*—are reported to have worked satisfactorily.

The appointment of a Special Forest Officer has done a good deal to reduce 'podu' (kumri or taungya) in the Golgonda Agency and Madgole hills.

It is reported that Kurupam estate has proceeded rather fast with reservation as many villages are largely dependent on 'podu' and that it would be well to proceed more slowly, as there is little or no good waste land in the estate for grant to people who would be deprived of their livelihood.

### (*b*) SUPPLY OF FOREST PRODUCE TO MEET THE WANTS OF THE PEOPLE.

226. Coupes in convenient localities for the supply of fuel, timber and bamboos were generally sold to contractors to meet the wants of the people. In *Gōdāvari Lower* the mangrove areas in the Kandikuppa and Coringa reserves were worked for supply of fuel to the fishing folk at fixed rates and the system worked satisfactorily. In *Kurnool East* agricultural implements and bamboos were collected departmentally by the Chenchus and sold to the public. In *Kurnool West* departmental collection of timber and fuel was also undertaken to provide work for the Chenchus. The prepaid indent scheme referred to in last year's administration report was not received with enthusiasm.

227. *Free removal of grass.*—This was permitted in *Vizagapatam*, *Gōdāvari Lower*, *Kistna* and the three *Kurnools*, and was freely availed of by ryots except in *Kurnool South*. In *Kurnool East* two villages of the Cumbum range were not allowed this concession, since they were suspected of having set fire to the forests.

228. *Hill tribes.*—In *Ganjām* the assistance practically of all Khonds living adjacent to or inside the reserves was enlisted in fire and general protection of forests, and in return for work done were allowed free removals of forest produce for domestic consumption or were given cloths or rice. The Gogodo Khonds whose lands had fallen into the hands of money-lenders were granted waste lands after the tree growth above two feet in girth standing thereon had been auctioned. In *Vizagapatam* the hill people had no complaints against the working of the Forest Laws and the privileges given to them were in no way abused; but a few agency villages were warned that they would lose their privileges if better protection of portions of reserves from illicit felling was not secured. In *Gōdāvari Upper* the Koyas and Reddis did good work in clearing fire lines and protecting the forests from fire. Payments for line-clearing and rewards for successful protection of the previous year were distributed by the District Forest Officer as usual. It would be well to make the payments for fire protection proportional to the results obtained after having allotted before the fire season a fixed maximum sum for each village or group of villages. This remark applies also to *Ganjām*. In *Gōdāvari Lower* the co-operation of the Koyas and Reddis in the Polavaram and Yellavaram divisions was enlisted as in the last year in the matter of fire protection as well as in the general protection of forests, and they were also employed on road, building and demarcation works.

The principal event of the year affecting Chenchu policy was the appointment of Mr. Saunders, Assistant Superintendent of Police, as Special Chenchu officer for the reformation of the Chenchus. His operations are at present restricted to the more populated portion of the Nallamalais, north of railway line. In *Kurnool East* the Chenchus on the whole behaved in a very satisfactory manner. They were, as usual, employed on almost all the forest works, such as collection of major or minor produce, on the fire protection, roads and bunding works, and as fire patrols and bungalow watchers. In nine gudems, the Chenchus made an attempt at cultivation. The best results were obtained in Garapenta where about 56 acres were cultivated. A drawback is that the great majority of the Chenchus have no plough bulls and have to hire villagers to plough their fields. The Collector is making provision in the Chenchu officer's budget for purchase of bulls for their use. In *Kurnool South* the Chenchus were employed on fire protection works and cultural operations and as fire patrols. In *Kurnool West* the Chenchus were employed on plantation works, collection of minor produce, timber and fuel felling, line-cutting, road repairs and bunding streams. They were also engaged to a small extent by contractors for bamboo work and tanning bark collection. The original Chenchu work—plantation work—being in its final stage as further lands suited to the purpose were not available and because the expense was absolutely prohibitive (it has amounted to as much as 400 rupees per acre of established plantation), efforts were made during the year to find some other kind of permanent employment for the Chenchus. Cultivation appears to be the ultimate solution of the problem of unemployment and plots of land near various villages were set apart for experimental cultivation; these it is hoped that the Chenchus will take over permanently.

It is now decided that the rewards to be given to Chenchus are to be rewards for general good behaviour, which will include not only abstaining from firing the forest themselves but turning out to extinguish fires which they or others may have started. It has been considered that payment on daily wages to Chenchus for work done in putting out fires which they themselves have started is wrong in principle. The District Forest Officer very practically suggests that the proper policy appears to be to make the Chenchu so weary of putting out his own fires that he will desist from firing. The only way to do this is to make it worth his while *at the time* to turn out, and to cut his reward at the end of the year if at any time he fails to turn out when called upon. Putting out fires is one of the most exhausting jobs possible and is extremely unpopular with all classes.

229. *Cultivation in reserved forests.*—In *Kurnool East* 84 acres and 1 cent were given to the Chenchus up to date free of assessment and 115 acres 47 cents on an annual assessment of two annas per acre. Thirty-eight acres were also given to the Sugalis for cultivation. These grants were made on the condition that they should help the department in extinguishing fires. In *Kurnool South* the four acres granted to the two Police talaiyaries and 20 acres to the cartmen near Chelama were not cultivated this year also. In *Kurnool West* the lease of the two plots of land in the Gadidamadugu reserve to the Christians of that place was renewed.

230. *Mining and prospecting.*—In *Gōdāvari Upper* a certain quantity of graphite was collected from the surface of the old Pedakonda graphite mines and sent to the Director of Industries at his request. It appears that the graphite is of too inferior quality for use in commercial pencil-making. In *Kurnool South* no work was done this year also on account of war. In *Kurnool West* Mr. Ghose was granted three prospecting licences to remove barytes from certain reserves in the Yerramalais. Copper has been located in Gani reserve and may possibly be worked in the near future. Mr. Ghose has applied for a monopoly in dolomite in the area near Betamcherla and Paniem.

231. *Realization of revenue from the usufruct of toddy-yielding trees on Government waste and poramboke lands.*—The total revenue was Rs. 44,701 against Rs. 40,019 in the previous year.

### (*c*) Live and Dead Stock.

232. *Live-stock*—(*a*) *Elephants.*—The sick elephant in *Ganjām*, Hilda, died of heart failure. The health of the other elephants is reported to be generally good. The Special Veterinary Inspector attached to the Western Circle inspected all the

elephants except the two in *Gōdāvari Upper* in June 1917 and reported. He had to waste a good deal of time on his tour partly because he did not start when he was ordered to.

(*b*) *Bullocks and buffaloes.*—In *Kurnool East* the buffaloe which was purchased last year to carry water for the Chenchus of Chinnamantrala in the hot season was sold. In *Kurnool South* there were six bullocks at the commencement of the year. Two bullocks died on account of old age and the rest were written off the accounts, being unfit for work on account of old age. In *Kurnool West* there were ten pairs of bullocks at the commencement of the year, of which one died and another was killed by a tiger. Some of the remaining bullocks are being used for cultivation by the Chenchus.

*Inventory of valuable stock.*—Stock registers were maintained and verified in all the divisions.

*Rain gauges.*—Rain gauges were maintained and readings recorded in all the divisions. Two stations in *Gōdāvari Upper* were abolished as they were found unnecessary and two new stations in each of the *Kurnool East* and *West* divisions were opened.

(*d*) Suits.

233. The appeal in the Privy Council against settlement of the Coringa Extension in *Gōdāvari Lower* was decided in favour of Government with costs. In *Kurnool East* a suit was filed in the District Munsif's Court, Markapur, against a ryot who refused to pay the cost of the logs he purchased in an auction sale. The case was decided in favour of the Government with costs.

234. *Classification of forests.*—The classification of reserved forests in all the divisions was completed. It was found that in *Gōdāvari Lower* certain reserves in the Peddapur and Gokavaram ranges had been wrongly classified and it is possible the same is the case in other districts.

235. *Panchayat system.*—In *Ganjām* preliminary work for the formation of panchayats for the Sondosolia reserve has been gone through, but there are matters to be discussed still with the local ryots before a plan is outlined. In *Gōdāvari Lower* proposals for handing over the Anantavaram reserves to the panchayats are pending with the Board. In *Kistna* five reserves were placed under panchayat management in July 1914 and the term of three years was over by 30th June 1917. The working of three reserves in the Bezwada range continued satisfactory. The panchayat of the Chintalapudi reserve was dissolved on account of continued unsatisfactory working. The working of the panchayat of Velagalapalli continued unsatisfactory and it was warned. The question of the formation of panchayats in *Kurnool South* and *West* is engaging the attention of both the Revenue and Forest authorities.

236. *Improvement of water-supply and grazing facilities in Government grazing grounds.*—In *Gōdāvari Lower* two tanks were repaired and a well was sunk; in other districts principally on account of financial stringency no such works were carried out.

237. *Opening small fuel coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—The wants of the people who live near forests are met by coupes sold to contractors, private forests and unreserved lands.

238. *Patrol system.*—The system has been introduced in all divisions except in *Gōdāvari Upper* and its working is reported to be generally satisfactory except in *Gōdāvari Lower* and *Kistna*. The District Forest Officer, *Gōdāvari Lower*, reports that the results of the system will have to be watched for another year and that, unless the staff is strengthened, the system cannot work well. In *Kistna* the existing system is not suitable as the reserves are scattered and its revision is under contemplation. In *Kurnool West* the system seems to have been exceptionally successful.

239. *Realizations of revenue from the usufruct of toddy-yielding trees on Government wastes and poramboke lands.*—Rupees 86,291 were realized against Rs. 74,589 of the previous year. The increase is due to larger amount realized in *Bellary* and *Anantapur*. Central Circle

## Rules under the Forest Act.

240. *Timber Transit rules.*—The rules are in force in all districts except *Bellary*, *Anantapur*, *Nellore* and *Chingleput* and they are reported to have worked satisfactorily. The rules need to be extended in *Chittoor* district especially in Palmanēr range wherein sandalwood will soon become valuable, and the Conservator considers that such rules are desirable in all districts if efficient check of removals of forest produce is to be rendered possible.

241. *Rules under section* 26 *of the Forest Act*—have worked satisfactorily and there was no complaint or abuse brought to light.

242. *Inventory of valuable stock.*—The stock registers are reported to have been maintained and verified in all districts.

243. *Rain-guages* were maintained in all districts except *Anantapur*, *South Cuddapah* and *Chingleput*.

244. *Cultivation in reserved forests with a view to afforestation.*—Nothing was done in this direction during the year.

245. *Specimens.*—In *South Cuddapah* 59 pieces of red-sanders, Shorea Tumbuggaia and Shorea Talura were taken to Dehra Dun by the Imperial Sylviculturist for purposes of ring-counting. The President, Imperial Forest College and Research Institute, Dehra Dun, was supplied with the required red-sanders timber pieces for preparation of veneers. A Forest Bulletin No. 34 containing a note by Mr. T. A. Whitehead, formerly District Forest Officer of East Cuddapah, was published on the red-sanders tree.

In *Chingleput*, two varieties of myrabolams were sent to Forest Economist, Dehra Dun, for chemical examination.

The red-sanders piece sent from *East Cuddapah* to the Director of Industries, United Provinces, Cawnpore, for experimental purposes and referred to in the last report is dealt with in Chapter IV.

246. *Suits.*—The suit against a tangedu bark contractor of *Anantapur* referred to in the last year's report ended unfavourably to the department.

In *North Cuddapah*, the suit filed against the shrotriemdar of Musalreddipalle agraharam and referred to in the last report is still pending in the District Munsif's Court at Nandalur.

In *South Cuddapah*, the owner of the land through which a foot-path and a cart-track run to Kodur red-sanders plantation, has filed a Civil Suit against the Government in respect of these paths. The suit is pending in the District Munsif's Court, Nandalur.

In *Nellore*, the Raja of Venkatagiri has filed a suit in the District Court to obtain possession of a portion of the Nandanavanam reserve of Kanigiri range and it is pending. The shrotriemdar of Turravaripalem has filed a suit for the possession of compartment No. 29 of the Rapur Veligonda reserve. This area, though notified under section 4, has never been finally reserved under section 16. A survey of the block and of the surrounding topography has been completed recently and the suit will be taken up by the District Judge very shortly.

Two claims have been preferred to areas in the Udayagiri Veligonda reserve in the Udayagiri range. The Public Prosecutor has been consulted and the claim seems to be ill-founded.

247. *Live-stock.*—*Chittoor* is the only district of the circle where there is live-stock. One buffalo died during the year. Three are now maintained for gardening purposes at Horsleykonda.

248. *Mining.*—In *Bellary*, the mining lease granted to Mr. A. Ghouse of Dhone in 1914 for 30 years was surrendered from 27th January 1917 and the ore collected in the mine was forfeited to Government. An application for the grant of prospecting licence for ochre within the limits of Haragondona and Tumti villages, received from Mr. A. Ghouse, is pending disposal.

249. *Nellore mica and mica mines.*—During the year the supervision and control of the special mica establishment was transferred from District Forest Officer to Collector.

*Applications.*—Twenty-four applications were pending at the commencement of the year and 99 were received during the year, making a total of 123. Sixty-three applications were disposed of and 60 were pending at the close of the year.

*Mines in Government lands (State mines).*—The number of mining leases in force at the beginning of the year was 46 (and *not* 39 as reported in the last year's report). There were two fresh grants and four relinquishments during the year.

*Prospecting licences.*—The number of licences in force at the close of the year was 13. There were 12 relinquishments, 1 renewal and 6 applications for conversion into mining leases during the year.

*Patta land mines (shared mines).*—The total number on the roll at the end of the year was 27. There were two relinquishments and four fresh grants during the year. The mines in which the yield has been considerable and which have paid during the year royalty of over Rs. 500 to Government are the following :—They are arranged according to the quantity consigned from them. The Lakshminarayana mine worked by Messrs. F. F. Chrestian & Co., heads the list, having paid the handsome amount of nearly Rs. 4,000 to the Government in the shape of royalty. The rest of the mines in their respective order are the 'F' mine of Messrs. W. A. Beardsell & Co., 'Pattabhirama' of Y. Ademma, 'Tellabodu' of Messrs. W. A. Beardsell & Co., 'Seetharama' of the Sankara Mining Syndicate, 'Shah' of Messrs. Badsha Sahib & Co., 'Kubera' of V. Lakshminarasiah and 'Pallimitta' of Messrs. Badsha Sahib & Co. These are all old and long established mines and the yield from them has been more or less steady.

*Mines in permanently-settled estates (private mines).*—There were 23 mines in the shrotriem and zamindari lands, yielding 215,223 lb. of mica valued at Rs. 1,34,349. The 'Kalichedu' of Messrs. F. F. Chrestian & Co. of Rāpur taluk and the 'Sankara' and 'Gouri' mines of Gudavalli Brahmayya of Gudur taluk are the best.

*Illicit mining.*—There were no cases of illicit mining during the year under report.

*Outturn and royalty.*—There has been decrease in the yield of mica as noted in the margin and is due to slackness of work on the part of miners owing to shortage of money and freight and other abnormal conditions on account of war. No other mineral was worked.

| Years | Quantity. LB. | OZ. | Royalty. RS. |
|---|---|---|---|
| 1915-16 ... | 505,037 | 3 | 15,985 |
| 1916-17 ... | 417,022 | 7 | 15,207 |

*Financial results.*—The revenue realized was Rs. 19,109 against Rs. 21,468 of last year and the expenditure Rs. 6,911 against Rs. 6,042. The decrease is due to less outturn of mica.

*Labour.*—One thousand nine hundred and eighteen persons were employed in mining against 1,879 of previous year. Wages continued to be the same as in last year.

*Accidents.*—There were three accidents, one in 'Sidheswara mine' in which a man was seriously injured, another occurred in Tatiparthi village in Atmakur taluk which resulted in the death of a boy and the third occurred at 'Tellabodu' mine in which one man was slightly injured in the eye.

*Ventilation and lighting in tunnels.*—Satisfactory in the absence of any remark by Inspector of Mines.

*Inspection by superior officers.*—The Inspector of Mines visited most of the important mines. Divisional Officer, Kavali, inspected three and Divisional Officer, Nellore, one. The District Forest Officer inspected a few mines in Gudur and Sydapuram.

*Prospect of industry.*—Miners and local buyers of mica fight shy of enquiries about market prices as they seem to think that enquiries are made with a view to raising the schedule values of mica. The demand for mica has been high and prices have been very handsome ranging between 45 to 70 per cent above the schedule rates for better quantities of size mica. Rounds and films are just now at a discount as the demand is low. Waste mica for which there was some demand two years ago has not been sold at all for the past two years. In spite of the market being so encouraging, miners have not worked as briskly as they might have done, owing to shortage of money and freight and other abnormal conditions consequent on the war.

## Recommendations of the Forest Committee.

### (*a*) *Classification of forests.*

250. The classification is complete in all districts except the newly reserved Yerrakonda Extension II the classification of which is under correspondence. Some revision was sanctioned in the classification of all districts except the three divisions of Cuddapah, and they have been approved by Board (vide B.P. Forest Nos. 27, dated 1st March 1917, Mis. 195, dated 22nd June 1917, Mis. 46, dated 14th February 1917, Mis. 245, dated 15th August 1916, No. 51, dated 1st May 1917, and Mis. 288, dated 30th October 1916. Further revision of the classification made will still prove necessary in some districts.

### (*b*) *Constitution of forest panchayats.*

251. During the year eighty panchayats were formed in *Bellary*, one in *Anantapur*, thirteen in *Guntūr*, two in *West Cuddapah* and eighteen in *Chingleput* districts. The working of all except one or two in *Guntūr* is reported to be generally satisfactory. Fifteen panchayats were renewed in *Guntūr* and thirteen panchayats were renewed in *West Cuddapah* during 1916–17 and they are reported to work fairly well.

### (*c*) *Opening of fuel coupes for rural supply.*

252. Coupes have been opened wherever there is local demand and they were sold to contractors as usual for felling. The working of this system is satisfactory. In *Nellore* it is reported that there seems to be no demand for some of the fuel coupes and in several cases where they have been provided for they have remained unsold.

### (*d*) *The patrol system.*

253. This system is in vogue in three Cuddapah divisions only and the working is reported to be satisfactory. The system introduced in *Bellary* last year was abandoned as it has been proved unsuitable. In *Guntūr*, the system was not tried during the year.

### (*e*) *Inducement to villagers to aid in forest conservancy.*

254. The kancha system of grazing has already been introduced throughout *Nellore*. During the year the system has been also introduced in *Chingleput*. In *Nellore* free removal of grass was allowed in the Veligonda and Yerrakonda reserves. In *North Cuddapah* and *West Cuddapah* the grazing fees for certain reserves were raised as the villagers failed to render help in putting out fires.

### (*f*) *Improvement of water-supply and grazing facilities in Government grazing grounds* (*B.P. Forest No.* 125, *dated* 29*th June* 1914).

255. In *Anantapur*, two existing wells were repaired. In *Guntūr*, six existing kuntas were repaired for the benefit of the cattle. In *Nellore* the ponds in kancha areas were repaired and improved. In *Chingleput* concession was granted to a philanthropic ryot of Kattugudalur to repair the Konjiliamman tank in Kattugudalur reserve. Nothing was done in this direction in other districts.

### (*g*) *Sale of plantations.*

256. In *Guntūr*, 634 acres in Bapatla, Ipurpalem, Kanuparti, Kothapatam and Nizampatam Casuarina plantations were sold. In *Nellore* district 622 acres of plantations lying fallow and 492 acres of Dugarajapatam plantation were sold. 308·09 acres of plantation in Kuthambakkam reserved forest in *Chingleput* district were also sold.

### *General.*

257. The Conservator cannot close this report without once again urging upon the Board and Government the imperative necessity of completely reorganizing the whole controlling, executive, protective and clerical establishments of the Forest Department in the Presidency. That such re-organization has long since become

overdue is a fact which is not, in the writer's opinion, open to dispute; and the fact has been recognized more or less both by the Board and Government in the remarks which one or other authority has been pleased to make when reviewing the Annual Administration reports for the past fifteen years.

In B.P. Forest No. 53, dated 12th March 1912, the Hon'ble Mr. W. O. Horne who was then Commissioner of Forests wrote as follows :—

"In B.P. Forest No. 76, dated 16th April 1907, the Board submitted proposals which included the controlling and clerical staffs, as well as those now dealt with, and those proposals were summarily rejected by Government in G.O. No. 2394, Revenue, dated 27th September 1907, on the ground that the Government were not convinced that such large increases were necessary. The Government then directed that the matter should be further considered by the Board with a view to reducing the proposed increases within more moderate limits. Subsequent to that date the controlling staff has been strengthened and reorganized, so that it is now in a condition very much more fitted to cope with its work; but, beyond converting a large number of temporary appointments into permanent, and beyond sanctioning at intervals a few additional range officers to man newly constituted ranges, nothing has been done to strengthen the executive and protective staff of the department, which remains for all practical purposes what it was in 1907. The revenue of the department in 1906–07 was Rs. 32,90,652 and the expenditure Rs. 24,80,662. The corresponding figures in 1910–11 were Rs. 38,80,411 and Rs. 32,25,800.

"Even if the proposals of the Board in 1907 were in excess of requirements, a question which it now serves no purpose to discuss, it is beyond doubt that even then some considerable increase of strength was needed, and it is a fact that practically none was effected, since the conversion of temporary appointments to permanent and the subsequent creation of a few new appointments for new charges cannot be regarded as an increase. In the five years which have elapsed since 1907 the state of affairs has not improved, and it is now necessary to face the facts or to acquiesce in the indefinite continuance of a state of inefficiency. The matter has closely occupied the attention of the Board for the past eighteen months. It is sufficient to state that, as the Government are well aware, rangers' charges are commonly so large that they cannot do their work, and cannot fairly be blamed for not doing it, that range officers are inadequately provided with trained subordinates able to assist them in executive and technical work, and that guards are so sparsely distributed and have such large beats that it is impossible for them to protect the forests and impossible for their superior officers to enforce their responsibility. Further, and this is perhaps the greatest weakness of all, the sanctioned staff of rangers is insufficient to keep manned even the limited number of excessively large ranges. Vacancies caused by leave, deputation, suspension, training, etc., cannot be filled, and ranges have to be put in charge of incompetent deputy rangers or even occasionally of foresters, while always some ranges are without any range officer at all and are looked after by a neighbouring ranger or by a junior member of the controlling staff, who is thus taken away from his own proper duties, or by any makeshift which can be devised. The same is the case with deputy rangers. In the first place, even were they all present, there are not enough of these officers for the work which they ought to do, and the number of foresters fit to act as deputy rangers is not in the least adequate to supply the places of those who are absent on leave, training, in charge of ranges, or from any other cause. The work of the department is thus kept in a constant state of struggling inefficiency, current work falls into arrears, working-plans are not worked up to, and progress is almost impossible."

In paragraph 4 of the same Board's Proceedings Mr. Horne also showed from the actual number of rangers and deputy rangers absent from duty from all causes for six separate consecutive months, that the average was no less than 25 per cent of rangers and 29 per cent of deputy rangers absent on leave (mostly on account of ill-health), deputation, training, suspension, etc.

The above correctly described the state of the forest establishment at that time: since when, and it is now more than five years ago, nothing has actually been done to come to the rescue of the department. Conservators have been called upon time after time and have submitted what in their considered opinion was necessary in the

way of increased establishment, and improvement in the matter of pay and prospects of the subordinates of the department. Conferences have frequently been held by the Forest Commissioner with the Conservators of the Presidency, but up to date the department stands where it did at the time Mr. Horne wrote of it in 1912, only matters have of course become considerably worse, and the ever increasing "constant state of struggling inefficiency" referred to by Mr. Horne has only become more marked than ever.

How is it possible that the work of the department can be carried on efficiently or any permanent and useful progress made under such disheartening conditions? It cannot be. The Conservator therefore very earnestly desires once again to respectfully invite the serious attention of the Board and Government to the present most unsatisfactory state of affairs and to urge the essential necessity of reorganizing the whole forest establishment without further delay. It is, the writer believes, now universally acknowledged that very great expansion is ahead of the Forest Department in India, and although forest officers, as all others, fully recognize that no large funds can be provided during the terrible war which is now raging throughout the world, nevertheless it behoves all to see, as far as in their power lies, that every preparation which can be made *is* made, so that the department should be placed with the least possible delay in a proper state of organization not only to cope with its present multifarious duties, but also to meet the progress and expansion which will certainly be expected of it. The state of affairs is, in the writer's opinion, becoming more desperate every year, and nothing short of a complete and generous reorganization of the whole controlling, executive, clerical and protective staffs will meet the position. The department has certainly earned such reorganization by its own dauntless efforts in the face of enormous difficulties and the Conservator desires to urge upon Government the necessity of fully recognizing this fact and of now acting generously towards it before it becomes too late.

*Copy of endorsement of E. A. Davis, Esq., I.C.S., Collector of Guntūr, on the Forest Administration Report of the Guntūr district for* 1916–17.

Forwarded.

(2) There is still much to be done in the way of disforestation in this district. This remark not only applies to whole reserves like Lam and Kuragallu, black soil areas suitable for cultivation, but also to portions of some of the larger blocks, especially the extensions, where large areas which went out of cultivation during a succession of bad years are now again in demand. A thorough revision of boundaries is therefore necessary in the case of the Sattenapalle, Palnad and Vinukonda ranges. Of course it is not proposed to give up areas of potential value for timber due to the presence of Hardwickia; but a judicious selection of areas for exclusion like the Kakirala extensions recently made over to the Lambadi settlements would be of distinct benefit to the administration. For they must eventually be given up, so that the time, labour and money spent on them as forest now will afford best return. An example is afforded by the Kolakalur reserved forest on which Rs. 290 out of the small amount available for this district was spent on demarcation last year. This reserved forest is now to be disforested and the expenditure is a dead loss. Similarly the time and labour spent on the preparation of working-plans for this kind of area will to a great extent be wasted. This being the case, it is recommended that no further expenditure be incurred on blocks at all doubtful of retention; and that capital expenditure and the preparation of preliminary working-plans should be rigidly confined to the main blocks pending a thorough rectification of boundaries.

(3) The absence of working-plans and proper stock maps has no doubt largely contributed to the failure of the forests in this district to show results commensurate with the time they have been under reservation. The fact that a large revenue was derived from grazing together with the operations connected with coastal plantations seem in some measure to have handicapped the development of other possibilities. Consequently the forests are badly equipped for exploitation and markets have yet to be opened up. From this point the expenditure on communications and buildings must be regarded as wholly inadequate. It would be a good thing to develop communications more especially in the forests along the proposed alignment of the new Palnad Railway and in the Vinukonda range so as to take advantage of the line

directly it is opened for opening up the markets for fuel in Guntūr and Bezwada, which are now partly supplied from the Nallamalais. The possibilities of river transport might also be considered, even if it involves giving coupes on concessional rates for a few years.

(4) The District Forest Officer has done good work in explaining the forest system in villages visited by him and I hope it may be possible for some development to take place on these lines. There must however be a certain amount of give and take in any arrangements made, and I should like to see District Forest Officers given greater power to confirm arrangements made by them on the spot. The inability to come to confirm an arrangement at once is a great handicap, especially in a large district like Guntur. Some progress has been made in the selection of 'open' and 'closed' areas; and when that has been completed, it will be easier to consider the whole subject of grazing. In the absence of complete stock maps, the incidence of grazing on the grazeable area must be somewhat speculative; and in spite of the District Forest Officer's remark that the incidence is now normal in this district it is open to doubt whether the grazeable area is not overgrazed.

(5) The form in which the accounts are now presented is very misleading as to the financial results of the working of the Forest Department proper. Revenue includes indiscriminately such items as receipts on account of trees on darkhast lands and the tapping fees, over which the department has little or no control, and also such items as the proceeds of the sale of disforested lands, which item comprises both capital expenditure recouped and revenue (deferred and current). Expenditure similarly includes that on both capital and revenue accounts. It will never be possible to gauge the financial results of the actual working of the department in a given area until the system of accounting is revised so as to show separately receipts and expenditure on capital and on revenue account and also to divide revenue derived from the working of the department from that originating in adventitious outside sources. This should be quite feasible without altering the system so far as final debits and credits in the provincial accounts are concerned. Were this done, the real progress of the department from year to year could be estimated. As it is, the financial result as illustrated by the surplus from this district is wholly illusory whether as a test of progress in this district or as a basis for future estimates of revenue for the Forest Department as a whole; nor is it possible to judge effectively of the proportion of expenditure to real revenue. The proportion in this district, however, seems to be dangerously low.

(6) A separate report will be sent on the working of panchayats, as I have not the inspection reports with me and do not wish to delay the administration report. I agree, however, with the District Forest Officer that the panchayats have in general worked satisfactorily.

(7) The establishment for the district is insufficient and a working-plans officer is really necessary to put the organization of the forests on a satisfactory basis. It must however be realized that expenditure on this purpose would not afford a return so quickly here as in some other districts; and in view of the present shortage of men and the financial stringency, I do not press the matter so urgently as I might otherwise do. The needs of this district both for staff and capital expenditure are however deserving of consideration as soon as conditions change.

258. *Realization of revenue from the usufruct of toddy-yielding trees.*—The revenue realized from this source was Rs. 14,765 against Rs. 14,308 in the previous year. The fixed fee system continued to be in force except in Madura and Tinnevelly. The usufruct of trees not taken up under the fixed fee system was as usual leased out in South Salem and realized Rs. 2,740 against Rs. 3,099 in the previous year. *Southern Circle.*

259. *Measures adopted to encourage the growth of manure-leaf yielding trees and shrubs.*—No operations were undertaken by the department in this direction. In North Vellore attempts were made by the ryots in certain villages of Cheyyar, Wandiwash and Gudiyattam taluks to raise crops of Daincha and Cassia siamea with fair results. The District Forest Officers of South Salem and Trichinopoly who ought to be interested in this question have again failed to report what has been actually done though it is known that the ryots in these districts are taking steps to grow their own green manure.

Steps are, however, being taken in most districts either to stop or restrict the practice of cutting the trees of the reserves to supply this produce.

It is regrettable that the practice of cutting the Cassia auriculata shrub for green manure has not been stopped now that the bark is so much in demand for tanning hides required by the War Office.

260. *Grant of cowles for the formation of casuarina plantations in sandy areas.*—Nil.

The planting of casuarina and cashew in the disafforested lands in South Arcot continues to be satisfactory.

261. *Cultivation in reserved forests.*—Previous year's leases were renewed in West Vellore, North and South Salem and Trichinopoly. In North Salem about 100 acres of lands were demarcated out during the year in Gothinatham in Gulhatti reserved forest for assignment for cultivation to some of the ryots of Tholuvabetta and Gulhatti with a view to the protection of sandal in those villages. The lands on the Palnis in the Madura district continued to be cultivated under muchilkas with cardamom, coffee and plantains.

262. *Improvement of water-supply in State forests.*—Bunding work was continued in North Vellore and streams in three reserves were bunded at a cost of Rs. 593. Similar work was entrusted to the Malayalis of the Chitteris of South Salem who were given the sum of Rs. 250 for the bunding of the main stream in those hills.

Tanks were repaired in the South Arcot and Trichinopoly districts and the water-supply of the Andipatti reserve in Madura improved.

Tube wells were started in three villages in South Vellore, but though the department is anxious to spread the tube well throughout the Javadis, very little work was actually carried out by the Agricultural Engineering Department who are in charge of the boring work.

263. *Supply of forest produce to meet the wants of the people.*—Departmental coupe contractors supplied the wants of the people at reasonable rates as usual in accordance with the terms of their agreements. The issue of permits for babul trees for agricultural requirements was continued as usual in Tinnevelly. In North Salem, the coupes are too few and far between to enable people to get what they want from reserves. Steps are being taken to reduce the size of the coupes and increase their number. Most of the requirements are met from patta lands and unreserves.

264. *Sale of fuel at the edge of forests* was attended to by coupe contractors.

265. *Arrangements for the transfer of sale depots to private agency.*—The contractors have opened depots in almost all the important towns and villages.

266. *Free removal of grass.*—This has already been referred to in paragraph 31 supra. In South and West Vellore the concession was permitted from December to March.

267. *Hill tribes.*—The Malayali forest village system has been successfully established in the South and West Vellore divisions and the Malayali co-operation is entirely responsible for the carrying out of the works provided in the sandalwood working-plan. Periodical darbars were held to educate the Malayalis who appreciated the forest village system. This system has not yet been introduced into the North Vellore division, where the Malayalis are assisting in fire protection in return for grazing concessions.

In the Chitteris of South Salem the Malayali village system continues to work well, but on the Kalroyens where the Government reserves are mingled with Jaghir Forest, the Malayalis are instrumental in assisting sandalwood smugglers.

In the Kollimalais of Trichinopoly a start has been made to introduce the Malayali village system but the system has not yet been brought into effect.

The Kanis in Tinnevelly deserted to the adjoining Kottalamalai and Singampatti estates as they were refused lands for kumari cultivation.

268. *Prospecting licences.*—No licences were granted during the year. The licence granted to Messrs. Gaudart & Co. for prospecting for minerals in the Ponniar reserve was cancelled.

269. *Timber and sandalwood transit rules.*—The rules are said to have worked satisfactorily in those districts where the rules were in force.

Two cases under the sandalwood transit rules have been brought to court in South Vellore and two in each of the districts of South Salem and Trichinopoly. The absence of rules in South Arcot has undoubtedly led to smuggling from the adjoining Kalroyen Hills. In the North Arcot district there is a tendency on the part of merchants to set up stills outside the protected area, and this coupled with the fact that the tree is spreading in the North Vellore district calls for the introduction of transit rules in that division.

270. *Rules under sections 26 and 32 of the Forest Act.*—The rules are reported to have worked satisfactorily and no complaints were brought to notice except from Attur range in South Salem division where large quantities of fuel were being smuggled in by the Paraiahs of Attur from the Paithur unreserves.

271. *Control of unreserves by the Forest Department.*—The transfer to the Forest Department of the Land Revenue Administration of certain hill villages in the Tiruppattur Javadis was effected in the course of the year and a similar transfer in respect of the unreserves in the Yalagiris is under consideration.

272. *Rules regarding the levy of composition fees.*—Attention was paid to the rules on the subject.

273. *Arrangements made in holding the villagers adjacent to particular forests responsible for the protection of those forests by dividing the village and blocks of forests concerned.*—This question has been treated under the heading of "Hill tribes." In all the northern districts of this circle the forests are inhabited by hill tribes and until a village system has been introduced for all these hill forests, no progress can be made in dealing with the low landers.

## LIVE AND DEAD STOCK.

274. *Inventory of valuable stock.*—Stock registers were maintained in all districts and verified at inspections. The total value of the dead stock in the circle at the end of the year was Rs. 3,84,001 as against Rs. 4,30,558 in the previous year.

275. *Rain gauges.*—Readings were recorded in all the rain gauge stations.

276. *Specimens.*—Specimens were sent to the Director of Industries from North Vellore, South Arcot, Madura and Tinnevelly. These specimens were chiefly connected with the pencil industry.

Some specimens of Erythroxylon monogynum, false sandalwood, are being tested by sandalwood merchants for their oil value.

Several specimens have also been sent to the Gass forest museum. On a call from Messrs. Chambers & Co., Anogeissus leaves for Tanning purposes were sent and declared to be of no value. After the close of the year the Conservator, through the Tanning Conference at Dehra Dun, learnt how these leaves should be prepared and dealt with. The powder prepared from the young leaf properly dried is known as "Esociet Sumac." Specimens of this sumac prepared in Madura have been roughly tested by Mr. Pilgrim, tanning expert, and found to contain a far larger percentage of tannin than the bark of the well-known Cassia auriculata.

## PREVIOUS YEAR'S SUITS.

277. *North Vellore.*—The boundary dispute in Gundlapalle reserve was decided in favour of Government.

*South Salem.*—The question of the ownership of the range of hills known as the Neiyamalais and the adjoining hill and valley in the Salem and Attur taluks has been decided in favour of the mittadar.

*Trichinopoly.*—The second appeal preferred by Arunachala Reddi to the High Court ended in favour of Government. The suit filed by the Kulittalai pattadar is still pending disposal in the District Munsif's Court.

*Madura.*—The appeal preferred by Government against the District Court's decision in the suit by a tank-bed contractor was decided against the Government.

*Tinnevelly.*—The Kuttalam waterfall appeal is still pending in the Privy Council.

NEW SUITS.

278. *Madura.*—The sale of encroachment lands and patta lands on muchilkas have brought about two new suits during the year—one filed by D. P. Rama Rao for lands included in Kallar reserve, Palni range, and the other filed by K. Peddan Chetti and others for lands in Amburuvi reserve in Kodaikānal range.

In the former the plaintiff's contention is that the lands advertised for sale are not encroachments but lands assigned to him on patta at the time of the forest settlement. In the latter it is contended that as the lands were given to the plaintiffs on patta by the Revenue Department, the Government have no claim to reserve these lands or to compel the plaintiffs to take them on muchilka. The cases are still pending.

FOREST COMMITTEE'S REPORT.

279. *Classification of reserves.*—The reclassification of reserves in South Arcot was finally sanctioned during the year thus completing the classification for the circle.

PANCHAYAT SYSTEM.

280. *North Vellore.*—The 33 panchayats formed for ten reserves were dissolved by the Board on account of several irregularities committed in connexion with their formation and fresh panchayats were sanctioned after the close of the year.

In *South and West Vellore, North Salem and Madura* no progress has been made, but in these districts there are very few reserves placed in class V.

*South Arcot.*—In addition to those of last year panchayats were sanctioned for six reserves for the current year.

*South Salem.*—Panchayats have been formed for all the class V reserves except four.

*Trichinopoly.*—Panchayats were formed for 27 out of 36 reserves.

*Tinnevelly.*—Besides the three reserves which were handed over to panchayats in the previous year, the formation of a panchayat for Sivalaperi reserve was sanctioned during the year.

281. *Patrol system.*—The system was continued in North Vellore, South Arcot and South Salem and introduced in one range in Trichinopoly. The system is undoubtedly sound but want of establishment prevents it becoming a real success.

282. *Establishment.*—The cry for extra establishment is universal. Ranges cannot be properly manned, subordinates cannot be properly supervised and even pressing work cannot be carried out. Year after year work is expanding and during the current year we have been confronted with three works of the greatest magnitude—

(1) Supply of timber from the evergreen forests.
(2) The control of tan stuffs.
(3) Spike disease.

All of these works demand the strictest attention and lakhs of rupees of revenue are involved, but the development of work is rendered impossible by the paucity of establishment.

*Western Circle.*

283. *Realization of revenue from the usufruct of toddy-yielding trees, etc.*—The revenue realized from this source was Rs. 1,124 against Rs. 1,240 in the previous year. The *Mangalore* divisions, *Kollegal*, *Central* and *South Coimbatore* contributed to this. The amount differs from that credited under II (*f*) which was due to wrong classification.

284. *Measures adopted to encourage the growth of manure-leaf-yielding trees and shrubs.*—No measures were taken nor were any required as except in *North Mangalore* the requirement is met from private lands.

285. *Supply of forest produce to meet the wants of the people.*—As in previous years the concession of free removal of grass for thatching and fodder was continued in *Mangalore* divisions; there was no abuse. Timber and bamboos were sold by public auction in the *South* division. In *Malabar*, the supply from private forests and

lands was adequate for the local demand. In the *Nilgiris*, small timber, fuel and bamboos, were, as usual, removed on permits. The Badagas obtain fuel at the nominal fee of Rupee 1 per house for the year. The public of Ootacamund were supplied with firewood from the plantations while that of Coonoor and Wellington had this privilege suspended temporarily, the stock of firewood being inadequate owing to the increased demand by the Military Department. Removal of brushwood at one anna per headload from the areas under felling was allowed. *Kollegal*—Small timber and bamboos were retailed departmentally at the time of plague for the construction of a health camp. The demand for firewood except in *Kollegal* town was met from unreserved lands; the supply of *Kollegal* town was made by contractors who purchased fuel from the department. The supply of forest produce in the other divisions of *Coimbatore* was left to contractors and there were no complaints. The demand for small timber and agricultural implements in *North Coimbatore* was met by retail sales from forest depots. Brake-poles were felled departmentally and sold to the cartmen frequenting the ghat roads in *North* and *South* divisions. The gleaning of brushwood in headloads from coupes under felling was continued in the *Central* division.

286. (*a*) *The working of the Forest panchayats—Reserved forests.*—During the year two reserved forests in *South Coimbatore* aggregating 1,564·29 acres were placed under panchayat management. The areas managed by panchayats are given below :—

| District. | Number of reserved forests managed by panchayats. | Area in acres. | Assessment imposed. | Number of panchayats managing the areas. |
|---|---|---|---|---|
| | | | Rs. | |
| Mangalore North .. .. .. .. | 1 | 89·34 | .. | 1 |
| Central Coimbatore .. .. .. .. | 7 | * 4,441·25 | 1,074 | 12 |
| South Coimbatore .. .. .. .. | 6 | 3,438·83 | 485 | 3 |
| Total .. | 14 | 7,969·42 | 1,559 | 16 |

* Revised figures furnished by the District Forest Officer.

*Reserved forests.*—In *Mangalore North*, the panchayat is reported to have worked well and improved the forests. In *Central Coimbatore*, most of the forests were overgrazed. Otherwise the panchayats have generally managed satisfactorily and maintained accounts. Certain areas were cleared of prickly-pear and lands were ploughed to facilitate the growth of grass and certain areas were sown with seeds of Kolukkattai grass. In *South Coimbatore*, the Dalavoypatnam panchayat is reported to have managed the forests satisfactorily, improved the water-supply, removed prickly-pear and repaired cart-tracks and paths. The panchayat for Uthiyur forest improved its management during the year. The third panchayat was only formed at the close of the year. *Unreserved lands.*—Two small pieces of unreserved lands near Udipi and Karkal in *Mangalore South* and the Andiyur and Nagalur unreserves aggregating 3,567 acres in *North Coimbatore* were under the management of panchayats; nothing is mentioned about the working of the former while that of the latter is reported to be far from satisfactory.

(*b*) *Opening of small coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—In *North Coimbatore* one fuel coupe near Kottamangalam was opened at the close of the year. An attempt to open a coupe of 10 acres near Hassanur for supply of small agricultural implements failed for want of demand. There was no demand for such coupes in the other divisions as the coupes sold to contractors, private forests and unreserved lands met the wants of the people.

(*c*) *Measures adopted for improving the water-supply in Government grazing grounds and the facilities for grazing and pasturage.*—No measures are required in the West Coast districts and in *the Nilgiris*. Nothing was done in *Kollegal* and *North Coimbatore* owing to the financial restrictions and in *South Coimbatore* pending settlement of grazing schemes. In *Central Coimbatore* the forests are within easy reach of the villages from which cattle resort for grazing.

(*d*) *System of patrol by a gang of subordinates.*—The system which was introduced last year in one of the ranges of *Central Coimbatore* as a tentative measure is reported to have worked successfully and resulted in the better protection of

forests. It is not required in *Malabar* and in the two ranges of *South Coimbatore* and was not introduced in the other divisions owing to the paucity of establishment. The Range officers of Pollachi and Udumalpet in *South Coimbatore* are reported to have made some patrols with success.

287. *Grant of cowles for the formation of casuarina plantations in sandy areas.*—*Nil.* Such areas are uncommon in this circle.

288. *Rules under the Forest Act*—

(*a*) *Timber transit rules.*—The rules in *South Kanara*, *Malabar* and *Coimbatore* are reported to have worked satisfactorily.

(*b*) *Rules under Section* 26 *of the Forest Act.*—The rules are reported to have worked satisfactorily with no abuse of the privileges. Out of 489 acres of unreserved lands that remained under the control of the Forest Department in *North Malabar*, 81·64 acres were transferred to the control of Revenue Department.

(*c*) *Other rules.*—The sandalwood transit rules in *South Kanara*, *Kollegal* and *North Coimbatore* and the shooting and fishing rules in the *Nilgiris* generally worked well. It is reported that the transit rules have not done very much towards checking thefts from Government unreserves in *Mangalore North.*

289. *Hill tribes.*—The *Kudubies* in *Mangalore North* and the *Mahratties* in *Mangalore South* supplied labour for departmental works and were in return given lands for *kumri* cultivation. The *Kurumbers* in *North Malabar* were given, as an inducement to live in the forests, 88 acres in two ranges for tuckle cultivation free of assessment on condition of their having the areas sown with teak seeds. The experiment was a failure in one of the ranges owing to laxity of departmental supervision but in the other it was fairly successful. The *Mulcer* watchers in *South Malabar* were given house-sites and lands for cultivation. In the *Nilgiris*, while it is easy to get *Kurumbers* as elephant attendants, the difficulty of securing them for departmental labour continued. They prefer to work on private estates where both sexes earn good wages. The *Kasuba* settlement at Anaikatti was continued but the settlers proved troublesome having failed to assist in fire protection and connived at sandal thefts and consequently the headman of the settlement and some others were evicted. The *Irulars* who cultivate lands in the eastern and southern slopes were not useful in the matter of supply of labour. The *Sholagar* settlements in *Kollegal* and *North Coimbatore* were continued; the extent of land granted for cultivation free of assessment in the latter division is reported to be 1,356 acres. The hill tribes (*Irulars*) in *Central Coimbatore* continued to supply labour and were granted lands to the extent of 946 acres for cultivation free or on payment of nominal rent. In *South Coimbatore* twelve *Puliya* families were located at Lower Punachi to provide labour and 24 acres were assigned to them for cultivation free of assessment.

290. *Cultivation in reserved forests.*—The undermentioned cultivations were permitted in reserved forests besides those referred to in paragraph 64. Tenant-at-will leases covering 5·90 acres on an annual rent of Rs. 6-2-11 in *Mangalore North* and 15·19 acres with a rent of Rs. 13-4-0 in *Mangalore South* were granted. In *North Malabar* 256 and 544 acres for ponam and wet cultivations respectively were leased out. *South Malabar.*—The annual lease of 4 acres in old Amarampalam reserved forest for paddy cultivation on an annual rent of Rs. 10 was renewed. The lease of Kariari and Talikolli paddy fields—120 acres—in the new Amarampalam reserve was in force. Three Chetti families were licensed to reside in and cultivate land free of assessment (extent not reported) in Benne reserved forest in the *Nilgiris*. The lease of lands for coffee planting in *Kollegal* and the grant of 169 acres for cultivation in Gutialattur and North Burghur reserved forests in *North Coimbatore* continued. *Central Coimbatore.*—The lease of 84·84 acres in Chennimalai reserved forest free of assessment for a period of 30 years for a Panchama settlement was in force. *South Coimbatore.*—Leases of lands on the Anamalais for cultivation of plantation products continued. Fresh leases were not granted during the year pending settlement of the question of forming Cinchona plantations on the hills.

A proposal to transfer the management of the Anamalai Township to the Revenue Department was pending approval of Government and was sanctioned after the close of the year.

*Live and Dead Stock.*

291. (*a*) *Elephants.*—The capturing operations were carried out in *Malabar*, the *Nilgiris* and *South Coimbatore* and were extended to the Silent valley in *South Malabar* during the year. Twenty-one elephants were captured during the year and there were five births; seventeen were sold for Rs. 31,700, one was destroyed on account of infirmity and nine died; the number that remained at the close of the year was 104. The condition of the animals was generally good. The number of deaths included three young calves of which one died of poisoning, one from anthrax and one of injuries sustained in pit, three deaths from dropsy, one death from anthrax, one of general debility and one of cause not known.

(*b*) *Other live-stock—Bullocks.*—The casualties of the year were—two in the *Nilgiris*, condemned and destroyed; one in *South Coimbatore* was sold; one died from an accident and six of old age. The balance was reduced to 45. *Buffaloes*—Twenty buffaloes were purchased; four were sold and four died; the number remaining at the close of the year was 69 against 57 at its commencement.

(*c*) *Veterinary establishment.*—Mr. F. X. Mascarenhas made his usual inspections and treated the live-stock. There were no important operations. His work continued to be satisfactory. The Assistant Inspector who is attached to *South Coimbatore* is reported to have worked satisfactorily.

(*d*) *Inventory of valuable stock.*—Stock registers were maintained and verified at inspections. The value of live-stock and stores at the close of the year was Rs. 3,36,894 and Rs. 3,92,398 respectively.

292. *Rain-gauges.*—Maintained and recorded. One gauge in *Central Coimbatore* and another in *North Coimbatore* were not read for one and three months respectively, the bottles having been broken.

293. *Suits.*—The Thirumalpad of Nilambur preferred a second appeal to the Madras High Court against the award passed for the acquisition of Mudumalai and Kumbarakolli leased forests and it was disposed of in favour of the appellant by increasing the award by Rs. 8,050. The second appeal of the lessee of the private forests in the Attapadi valley referred to in the previous year's report was dismissed with costs. The civil suit against a timber contractor in *South Coimbatore* referred to in the last report was adjudged in favour of Government.

H. A. LATHAM,
*Conservator of Forests, Northern Circle.*

H. B. BRYANT,
*Conservator of Forests, Central Circle.*

P. M. LUSHINGTON,
*Conservator of Forests, Southern Circle.*

C. D. MCCARTHY,
*Conservator of Forests, Western Circle.*

# ADMINISTRATION REPORT OF THE MADRAS FOREST COLLEGE, COIMBATORE, FOR THE YEAR 1916–17.

## CHAPTER I.—CONSTITUTION.

### (1) *Staff.*

. The office of Principal was held by Mr. C. E. C. Fischer from 1st July 1916 to 20th May 1917 and by Mr. F. L. C. Cowley-Brown from 21st May 1917 to the end of the year.

. The posts of First and Second Imperial Instructors were held by Messrs. C. B. Dawson and H. C. Bennett, respectively.

. Mr. E. M. Crothers was First Provincial Instructor throughout the year.

. Mr. Cornwell, Extra Assistant Conservator, was the Second Provincial Instructor from the beginning of the year up to 18th November 1916 from which date he went on privilege leave and eventually vacated his appointment on the staff to join the I.A.R.O. as second lieutenant. He was succeeded by Mr. W. C. Hart, Extra Assistant Conservator.

. The two posts of Sub-Assistant Surgeon attached to the College were held by V. Ramunni Nayar from 1st July 1916 to 26th October 1916, R. Venkatasesha Ayyar from 4th Sepember 1916 to 7th June 1917 and K. Natesa Ayyar from 16th November 1916 to the close of the year. One of the posts was vacant from the beginning of the year to 3rd September 1916, 27th October 1916 to 15th November 1916 and from 8th June 1917 to 30th June 1917.

. These officers lectured on Hygiene and First-aid to the students of the senior division.

. Instruction in gymnastics was given by one of the havildars to the 1915–1917 students for two weeks in the year and in drill to both the divisions by the two havildars throughout the year. In future the senior division will have an hour's gymnastics twice a week during the headquarter terms.

### (2) *Board of Visitors.*

. The Hon'ble Mr. H. F. W. Gillman vacated the Presidentship of the Board of Visitors on 12th October 1916 and assumed charge as member of the Executive Council of His Excellency the Governor. He was succeeded by the Hon'ble Mr. M. E. Couchman.

. Mr. C. D. McCarthy, Conservator of Forests, returned from leave and joined the Board of Visitors of the College and Mr. F. L. C. Cowley-Brown proceeded on six months' leave from November, his place on the Board being taken by Mr. H. A. Latham.

## CHAPTER II.—RESULT OF EXAMINATIONS.

. The Board of Visitors met at Coimbatore on the 22nd June 1917 and remained till the close of the month when the certificates of the 1915–1917 division were awarded. The number of students who appeared for the final examination were 29.

The following list in order of merit shows the certificates awarded :—

| Name of student. | Name of circle or State to which attached. |
|---|---|
| *Honours.* | |
| 1. S. Ramachandra Ayyar ... ... ... ... | Central Circle. |
| *M.R.H.* | |
| 2. K. Jayaraman ... ... ... ... ... ... | Southern Circle. |
| 3. C. S. Ramanathan ... ... ... ... ... | Central „ |
| 4. N. Thiruvikraman Tampi ... ... ... ... | Travancore State. |
| 5. M. R. Duraiswami ... ... ... ... ... | Southern Circle. |
| 6. A. Manicka Mudaliyar ... ... ... ... ... | Northern „ |
| 7. S. M. Srinivasagam Pillai ... ... ... ... | Southern „ |

| | | |
|---|---|---|
| 8. | D. E. Lewin ... ... ... ... ... ... | Central Circle. |
| 9. | P. Dhananjaya Rao ... ... ... ... ... | Do. ,, |
| 10. | K. Venkataramanan ... ... ... ... ... | Western ,, |
| 11. | K. S. Raghavachar ... ... ... ... ... | Private student. |
| 12. | C. Karunakara Menon ... ... ... ... ... | Western Circle. |
| 13. | P. Karunakara Menon ... ... ... ... ... | Do. ,, |
| 14. | A. Subrahmanya Ayyar ... ... ... ... | Northern ,, |
| 15. | T. Paramasivan Pillai ... ... ... ... ... | Central ,, |
| 16. | L. A. Krishna Ayyar ... ... ... ... ... | Travancore State. |
| 17. | K. V. Krishnaswami Ayyangar ... ... ... | Hyderabad State. |
| 18. | M. Rama Rao Kini ... ... ... ... ... | Western Circle. |
| 19. | P. M. Mathew ... ... ... ... ... ... | Private student. |
| 20. | J. Ramalingam ... ... ... ... ... ... | Southern Circle. |

*M.R.L.*

| | | |
|---|---|---|
| 21. | V. Mahadeva Ayyar ... ... ... ... ... | Private student. |
| 22. | N. Kesava Pillai ... ... ... ... ... | Travancore State. |
| 23. | K. Thiruvenkata Achari ... ... ... ... | Northern Circle. |
| 24. | T. Balaramaswami ... ... ... ... ... | Private student. |
| 25. | B. Gulam Dustagir ... ... ... ... ... | Northern Circle. |
| 26. | C. S. Nanjappa ... ... ... ... ... | Private student. |
| 27. | S. A. Dawson ... ... ... ... ... ... | Northern Circle. |
| 28. | P. V. Ramana Rao ... ... ... ... ... | Private student. |

One student failed.

The Government and other prizes were awarded as follows :—

| Name of medal. | Name of student. |
|---|---|
| Best second-year student (gold medal) ... | S. Ramachandra Ayyar. |
| Best second-year student in Forestry ... ... | S. Ramachandra Ayyar. |
| Best second-year student in Survey ... ... | S. Ramachandra Ayyar. |
| Best second-year student in Range Administration. | S. Ramachandra Ayyar. |
| Principal's prize for Botany ... ... ... | S. Ramachandra Ayyar. |
| Campbell-Walker prize for the best all-round Ranger. | S. Ramachandra Ayyar. |
| Lodge prize for the best student in Engineering. | S. Ramachandra Ayyar. |
| Brazier prize for the best out-door Ranger ... | N. Thiruvikraman Tampi. |
| Indian Forester prize for the best essay on "Village Forests" | C. Karunakara Menon. |

. The students of the 1915–1917 division were examined in First-aid by Lieut.-Col. C. F. Fearnside, the District Medical and Sanitary Officer, Coimbatore, and his assistant Mr. S. Kesavaswami Ayyar. Twenty-six students gained the St. John's Ambulance Association certificates.

. The 1916–1918 division started with 34 on the rolls as per list attached. By the close of the year the number had been reduced to 27, 7 having been withdrawn from the college owing to incapacity or other causes.

. The final examination in Physical Science for the 1916–1918 division was held in June 1917.

. The Board of Visitors' gold medal for the best junior student was won by student C. Srinivasa Rao.

. Messrs. C. M. Hodgson, H. F. A. Wood, K. R. Venkatramana Ayyar, T. Clear, Saiyid Abdul Qadir Sahib and F. J. Marshall were the examiners for the final examination. The orals were supervised by the members of the Board of Visitors.

. Mr. C. E. C. Fischer adjudicated the essays submitted for the Indian Forester Prize.

. The senior division formed an average year—about as good as may usually be expected.

. The juniors are probably of a similar standard.

. The Examiners' reports show that the instruction has been thorough ; modifications in certain directions were suggested; these will be given effect to as far as possible. The want of text-books (prepared specially for the college) in sylviculture, engineering and range administration is a distinct drawback. Owing to the

relatively low marks allotted to Botany that subject is not regarded with sufficient seriousness by some students. At Dehra for the rangers' course a much larger proportion of the total marks is awarded to Botany. The withdrawal of conduct marks to count for certificates has greatly raised the qualifying standard, which perhaps is now rather too high for the present needs of the average ranger in the department. For disciplinary purposes the retention of conduct marks (as at Dehra) would be distinctly advantageous. A special allotment for practical efficiency and zeal is also desirable.

## CHAPTER III.—ADMINISTRATION.

At the meeting of the Board of Visitors held on 29th June 1917 amongst numerous other resolutions the following were passed:—

that the improvement of water-supply required urgent considerations;
that in place of college blocks in various districts a demonstration forest should be laid out on the college estate;
that a telephone or speaking tube should be provided from the Principal's office;
that construction of tennis courts and athletic ground should be proceeded with expeditiously;
that the Campbell-Walker Prize should be increased in value;
also that the sanitary arrangements of the sub-assistant surgeon's and clerks' quarters should be improved; and
that expert opinion should be obtained on the proposed scheme of panelling the front hall.

The following programme of touring was carried out during the year:—

*Senior division.*

*September.*—Komuttiyeri (Javadi hills)—Sandal work; Engineering; Botany.

*November-December.*—Mount Stuart—General Sylviculture; Elephant operations; Plant, Section and Estimates prepared for diversion of Tramline to save two furlongs of permanent way; Botany.

*January.*—Walliar—Fuel slide constructed; Transition Forest studied; Botany; Utilization.

*February.*—Sadivayal—Combined camp-working plans; Trestle Bridge construction; Designs and estimates for girder bridge over the Perur and for road-dam crossing the Vellapathi stream were sent to the District Forest Officer, Central Coimbatore;

*May.*—Bandyshola—Final Survey Examinations (Prismatic Compass and Plane Table Height measuring); Study of plantations; Botany; Utilization;

*Junior division.*

*September.*—Mount Stuart—Sylviculture of teak; Improvement fellings; Lantana eradication; Hydraulic Ram; Tramway alignment timber transport.

*November.*—Nilambur, Nedungayam and Calicut—Study of plantations; Stock mapping; Marking for thinning; Volume calculation; Demarcation; Survey; Rafting; Blasting; Culvert construction: Saw Mills; Tile works; and other industrial institutions visited.

*January.*—Mundanthorai—Teak coppice with standards; Weeding; Thinning; Enumeration; High Forest improvement operations; Road tracing; Culvert construction.

*February.*—Sadivayal—Combined camp-demarcation; Survey; Road tracing; Levelling; Charcoal preparation; Enumeration; Nursery operations; Standard marking.

*May.*—Ootacamund—Eucalyptus and conifers studied; Sample plots measured and estimated; Tree analysis; Markings for thinning; Charcoal operations; Survey; Road tracing; Botany excursions were undertaken from all Forest Camps.

During headquarter terms once a week the senior division was instructed in the erection of bridges of various patterns. After a day or two's practice a complete bridge can be assembled in three hours.

For the junior division the same days were devoted to survey of brickmaking, building, etc.

Both divisions attended the elephant sales at Walayar on October 18th.

All work carried out in camp has been recorded in full detail in the College Journals. Observations made and points of interest or importance were communicated to the various District Forest officers.

The thanks of the Principal are due to those officers, in whose divisions the College has toured, for their co-operation and assistance in making all arrangements possible for the comfort of the camp.

Mr. E. Marsden, the Imperial Sylviculturist, and Mr. P. M. Lushington, Conservator of Forests, Southern Circle, visited the junior division camp at Mundanthorai in January 1917: the Forest Commissioner, Mr. McCarthy, Conservator of Forests, Western Circle, and Mr. A. W. Lushington, C.I.E., paid visits to the senior division camp at Bandyshola, Coonoor.

*Health and conduct of students.*

On the whole the College during the year enjoyed good health.

Excluding the very few grave cases, that were sent to the municipal hospital for treatment, the following table shows the different classes of cases that were dealt with by the College Sub-Assistant Surgeon both in camp and headquarters:—

| | |
|---|---|
| Malaria, Phyrexia, etc. ... ... ... ... ... ... | 380 |
| Digestive, gastrites, gastralgia ... ... ... ... ... | 217 |
| Respiratory, laringitis, bronchitis, etc. ... ... ... ... | 146 |
| Ulcer, wounds, sprains, etc. ... ... ... ... ... ... | 287 |
| Miscellaneous—Neuralgia, eye-trouble, nose, teeth, etc. ... ... | 147 |
| Total cases treated ... | 1,177 |

The average weight of each division increased markedly during the year.

The conduct of the students was with the exception of a few minor lapses quite satisfactory. There were no serious breaches of discipline. Of the 23 Government students admitted on 1st August 1916, 18 are now in residence; of these 4 came with "moderate" characters from their District Forest officers and the remainder with "fair" or "good" characters.

## CHAPTER IV.—THE GASS FOREST MUSEUM.

Mr. G. Viswanatha Ayyar continued to be the curator throughout the year. He was placed in additional charge of planting operations on the college estate from April 1917. For this extra duty a deputation allowance was sanctioned by Government.

The museum catalogue was completed; the publication of one of the eleven sections was sanctioned.

The number of visitors to the museum during the year was 10,600 as compared with 5,000 in the previous year (visits of students and staff not included).

The members of the Indian Industrial Commission while at Coimbatore visited the museum.

The contributions during the year were numerous and included:—

350 herbarium specimens from Mr. M. Rama Rao.
126 do. do from Mr. P. F. Fyson.
238 do. do. from Mr. C. E. C. Fischer.
Elephant fœtus from Mr. E. C. Mascarenhas.
Bison head specimens from Mr. A. B. Jackson.
Do. do. from Mr. H. F. A. Wood.
32 trophies on loan.
12 specimens of Haustoria—Mr. P. M. Lushington.
22 photographs of Forest operations—2 presented by Mr. C. S. Ramanathan, student, Madras Forest College (1915-17); 6 presented by Mr. H. F. A. Wood; 1 presented by Mr. N. T. Tampi, student, Madras Forest College (1915-17); 12 presented by Mr. E. Marsden; 1 presented by Mr. E. M. Crothers.

The museum is at present overcrowded and wanting in systematic arrangement. These defects will be remedied after the Principal's forthcoming visit to the Dehra Museum.

## Chapter V.—Water-supply, Planting, Roads.

As regards *drinking water*, it seems improbable that the present sources of water-supply will ever produce potable water, and that until the Muthikulam project materializes the college will have to depend upon the present unsatisfactory expedient of obtaining drinking water through a contractor at a high price from a reputed, distant and purer well. The Executive Engineer has been asked to investigate a proposal for sinking a well near the bed of the stream about a mile to the north of the college. If this is found feasible, it would be desirable to consider the question of a joint supply to the Agricultural and Forest Colleges (as well as to any other institutions that may eventually find a habitation in this locality).

For *domestic purposes* (bathing, washing, sanitation, etc.) and for irrigating the avenues, arboretum, and nursery the requirements of the college, when in residence, amount to 7,200 gallons per day; the actual supply varies from 2,400 to 3,600 gallons per day. Hardship, inconvenience, and lack of progress consequently result.

The dhobie-khana built at a cost of Rs. 1,800 in March 1917 cannot be used. Water for students and staff is only available for two hours per day; owing to the cost of obtaining water, from a well outside the college estate through a contractor, casualties in the avenues cannot be replaced, the welfare of the existing trees is not safeguarded, the nursery has until lately been temporarily abandoned, and the project of forming an arboretum has been held in abeyance for the past two years (it is now being started on a limited scale).

If, by an increase in the supply, the work of the engine can be augmented to its full development the planting up of the estate will rapidly progress, and the grounds will present a very different aspect from their present unattractive appearance.

The Executive Engineer has been asked to examine five possible expedients for additional sources of supply (including a windmill, the acquisition of a second well to be worked by the present engine, and the collection of rain water from the roof of the college and all buildings). One or more of these projects should provide an ample quantity—it is doubtful whether the quality of the sub-soil supply will ever improve.

The cost of planting has been enhanced by the nature of the soil, which necessitates in the case of each tree put in an excavation of many cubic feet to be replaced by red earth brought from a distance. Similarly this soil necessitates the embedding of all buildings, sign-posts, gymnasium apparatus, etc, in a deep concrete foundation.

In wet weather the land is a morass and it has consequently been found necessary lately to connect, by a gravelled path on a stable bed, all buildings frequented daily. The cost of maintenance of roads and paths and of all buildings (excepting such residential quarters as the Public Works Department agrees to maintain) will necessitate a considerable increase to the college budget. It would probably prove a real economy in money and in efficiency to place all the estate work (roads, planting, building) under the control of a whole-time officer—a retired trained ranger for choice. The capital cost of all buildings for which the Principal is responsible (apart from those under the control of the Executive Engineer) amounts to Rs. 3,74,275; the charge debitable to repairs on these buildings may amount, on the analogy of the Public Works Department practice, to an annual maximum of Rs. 7,475.

The construction cost of roads up to date is about Rs. 8,500.

## Chapter VI.—General.

The stock of the college was checked in July 1916 and steps were taken to remedy the defects noticed. The office was inspected by the Principal in July 1916 and March 1917.

The service registers have been posted up-to-date and the services of the out-going students were verified up to 2nd July 1917.

The work of the office has been satisfactory and credit therefore is due to all the clerks as well as to Mr. S. Doraiswami Ayyar, Head Clerk, and Mr. A. Marudachalam Pillai, Storekeeper.

The Sub-Assistant Surgeon Mr. Natesa Ayyar has carried out his duties efficiently and with zeal.

The conduct of the subordinate establishment throughout the year was fair. The pay sanctioned for the gardeners and sweepers is less than the market wage in Coimbatore and therefore considerably less than what this class considers it has a right to expect in the more remote locality of the Forest College. To induce these people to continue for any length of time in the service of the college (and thus to become more efficient) requires exceptional tact on the part of the House Tutor. This quality Mr. Crothers has displayed, and the sanitation is on the whole very satisfactory. The conduct of peons, watchmen, and college servants generally depends in no small measure upon the nature and extent of control exercised by havildars. The loss resulting from the regretted departure on service of havildar Arogiasami on 21st August 1916 has by no means been made good by his successor.

*Athletics*, under the guidance and encouragement of Mr. Bennett, were up to the average of past years. Hockey and football were regularly played twice a week during headquarter terms and cricket when opportunity offered. The athletic sports were held in the Coronation Park, and a marathon race for the whole college (winner C. S. Nanjappa) was run off at Sadivayal. The previous record was beaten by four minutes. The Pentland Shield for the best all-round athlete and the Richmond cup for the championship of the athletic sports were also won by C. S. Nanjappa. The continued lack of an athletic ground and tennis courts (the latter sanctioned in G.O. No. 270 W., dated 15th February 1917) at the college is a serious handicap to greater progress in games and is a misfortune to all concerned. Athletics are compulsory and students are selected partly for their efficiency therein, as being likely to afford the best material for future rangers. From experiments conducted by Mr. Bennett it seems probable that a suitable athletic ground can be laid down at a comparatively moderate cost. The pavilion was completed during the year by the Public Works Department.

Mr. Fischer has recorded that all members of the staff have worked with zeal and loyalty, with which opinion the present Principal is in entire accord.

MADRAS FOREST COLLEGE, COIMBATORE,
*27th September* 1917.

F. COWLEY-BROWN,
*Principal.*

*Madras Forest College, Coimbatore.*

| Name of student. | Circle or state to which attached. |
|---|---|
| 1. A. J. M. Snaize | Northern Circle. |
| 2. M. Narasinga Rao Nayudu | Do. |
| 3. V. Parthasarathi Nayudu | Do. |
| 4. I. Sambasiva Rao Nayudu | Do. |
| 5. B. S. Sankara Ayyar | Do. |
| 6. T. S. Ratnavelu Mudaliyar | Do. |
| 7. A. Vyasalu | Central Circle. |
| 8. A. Bhaviah | Do. |
| 9. C. R. Rajagopalan | Do. |
| 10. E. Venkatasubbiah Chetti | Do. |
| 11. A. Muthukrishnan | Do. |
| 12. S. G. Venkataramanan | Southern Circle. |
| 13. B. B. Saiyid Yahia | Do. |
| 14. B. T. Sitaraman | Do. |
| 15. K. Parthasarathi Ayyangar | Do. |
| 16. U. Rangaswami Ayyar | Do. |
| 17. A. K. Anantharama Ayyar | Do. |
| 18. C. Vasu | Western Circle. |
| 19. J. S. Rowland | Do. |
| 20. T. Kondathu Goundan | Do. |
| 21. C. Sreenivasa Rao | Do. |
| 22. A. B. Fenn | Do. |
| 23. E. S. Krishna Rao | Do. |
| 24. J. Venugopala Nayudu | Mysore. |
| 25. P. K. Parameswaram Pillai | Travancore. |
| 26. J. A. Stephen | Do. |
| 27. Abdul Gaffar | Hyderabad. |
| 28. Abdul Azeez | Do. |
| 29. Udiandra Timmayya | Coorg. |
| 30. G. M. Bartholomeusz | Ceylon. |
| 31. V. Arasaratnam | Do. |
| 32. T. S. Ramamurthi | Private. |
| 33. S. Shankara Alwa | Do. |
| 34. N. S. Krishnaswami | Do. |

Summary of revenue and expenditure for the forest year July 1916—June 1917.

| Head of service. | Amount. RS. A. P. |
|---|---|
| *Receipts.* | |
| V (*b*) Other sources ... ... ... ... ... ... | 7,229 3 5 |
| *Expenditure.* | |
| Refunds and drawbacks ... ... ... ... ... | 8 12 0 |
| *A.—Conservancy and Works.* | |
| A (vi) (*c*) Stores, tools and plants ... ... ... ... | 5,177 13 9 |
| A (vii) (*a*) Roads and bridges ... ... ... ... | 1,596 3 0 |
| A (vii) (*b*) Buildings ... ... ... ... ... ... | 238 7 6 |
| A (viii) (*e*) Sowing and planting ... ... ... ... | 291 0 8 |
| A (viii) (*g*) Other works ... ... ... ... ... | 384 15 2 |
| A (ix) (*b*) Other charges ... ... ... ... ... | 1,003 11 9 |
| Grain compensation allowance ... ... ... ... | 16 15 6 |
| Total A ... | 8,709 3 4 |
| *B.—Establishment.* | |
| I (*a*) Salaries of Conservators... ... ... ... ... | — 101 2 3 |
| I (*b*) Do. superior officers ... ... ... ... | 50,897 1 6 |
| I (*c*) Subordinate establishment ... ... ... ... | 25,662 5 0 |
| I (*d*) Office establishment ... ... ... ... ... | 2,712 0 11 |
| I (*d*) Grain compensation allowance ... ... ... | 201 3 10 |
| II Travelling allowance ... ... ... ... ... | 7,728 7 8 |
| III (*b*) (1) Rents, rates, and taxes ... ... ... | 5 0 0 |
| III (*b*) (2) Sundries ... ... ... ... ... ... | 9,024 2 10 |
| Total ... | 96,129 3 6 |
| Total A and B including refunds ... | 1,04,847 2 10 |

Abstract showing the live stock, stores, tools, etc., for the year ending 30th June 1917.

| District. | Description of stock. | On hand at commencement of the year (from 1st July 1916). | | On hand at the end of the year (up to 30th June 1917). | | Difference in value in favour of the year. | Difference in value against the year. |
|---|---|---|---|---|---|---|---|
| | | Number. | Amount. | Number. | Amount. | | |
| | | | RS. A. P. | | RS. A. P. | RS. A. P. | RS. A. P. |
| Madras Forest College, Coimbatore. | Surveying and other instruments. | 1,162 | 7,813 13 11 | 1,645 | 7,010 2 4 | .. | 803 11 7 |
| | Tools .. .. | 429 | 840 5 3 | 470 | 399 6 5 | .. | 440 14 10 |
| | Furniture .. .. | 1,661 | 27,955 1 9 | 1,474 | 25,973 6 7 | .. | 1,981 1 2 |
| | Tents .. .. | 163 | 11,876 10 3 | 136 | 1,734 0 0 | .. | 10,142 10 3 |
| | Uniforms and accoutrements. | 76 | 190 0 0 | 107 | 188 1 9 | .. | 1 14 3 |
| | Scientific apparatus. | 3,940 | 3,249 5 0 | 1,602 | 1,014 1 1 | .. | 2,235 3 11 |
| | Photographic apparatus. | 9 | 612 4 0 | 9 | 530 14 9 | .. | 81 5 3 |
| | Gymnasium apparatus. | 9 | 478 0 0 | 9 | 439 14 4 | .. | 38 1 8 |
| | Machinery (oil engine, etc).* | .. | .. | 2 | 2,850 0 0 | 2,850 0 0 | .. |
| | Miscellaneous .. | 1,674 | 2,423 4 0 | 1,860 | 4,176 7 7 | 1,753 3 7 | .. |
| | Total .. | 9,123 | 55,438 12 2 | 7,314 | 44,316 6 10 | 4,603 3 7 | 15,725 8 11 |

* Handed over by the Public Works Department.

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# APPENDICES.

APPENDIX A.—Comparative statement of number and origin of fires that occurred during 1916–17.

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire-traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | | | By intentional firing | | | | | | | | | |
| | | | | | By workmen employed in the forests, by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | Total. | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Northern Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Ganjam .. .. | .. | .. | 2 | 50 | .. | .. | 5 | 154 | .. | .. | .. | .. | 2 | 165 | 2 | 159 | 6 | 229 | 15 | 707 | 7 | 125 | 24 | 882 |
| Vizagapatam .. | .. | .. | 2 | 21 | 1 | 3 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 5 | .. | .. | 6 | 26 |
| Godavari, Upper. | .. | .. | 11 | 20,360 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 8 | 6,942 | 19 | 27,302 |
| Do. Lower. | .. | .. | .. | .. | .. | .. | 2 | 62 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 30 | 3 | 92 | 8 | 182 | 11 | 274 |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | 3 | 86 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 86 | .. | .. | 3 | 86 |
| Kurnool, East .. | 2 | 62 | 5 | 1,800 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 4 | 2 | 4 | 71 | 73,292 | 80 | 75,158 |
| Do. South .. | 2 | 273 | 9 | 12,058 | .. | .. | 9 | 6,399 | 3 | 40 | 1 | 8 | 19 | 9,351 | 1 | 1,600 | 27 | 58,844 | 60 | 76,242 | 10 | 2,190 | 81 | 90,763 |
| Do. West .. | .. | .. | 7 | 2,117 | .. | .. | 24 | 3,121 | 3 | 250 | .. | .. | 8 | 2,220 | 27 | 18,593 | 6 | 8,467 | 68 | 32,651 | 19 | 16,695 | 94 | 51,463 |
| Total .. | 4 | 335 | 36 | 36,406 | 1 | 3 | 46 | 9,824 | 6 | 290 | 1 | 8 | 29 | 11,736 | 30 | 20,352 | 42 | 67,574 | 155 | 109,787 | 123 | 99,426 | 318 | 245,954 |
| *Central Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Bellary .. .. | 5 | 551 | 10 | 5,230 | .. | .. | 13 | 1,982 | 1 | 4 | 1 | 15 | 2 | 309 | .. | .. | .. | .. | 17 | 2,290 | 143 | 60,504 | 175 | * 68,575 |
| Anantapur .. | .. | .. | 15 | 9,793 | 4 | 179 | 34 | 12,004 | .. | .. | 3 | 33 | 54 | 26,126 | 1 | 1,150 | 26 | 13,372 | 122 | 52,864 | 70 | 29,026 | 207 | 91,683 |
| Guntur .. .. | .. | .. | .. | .. | .. | .. | 33 | 9,507 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 33 | 9,507 | .. | .. | 33 | * 9,507 |
| Cuddapah, North. | 9 | 32,532 | 12 | 29,346 | .. | .. | 2 | 173 | 1 | 260 | .. | .. | 14 | 16,046 | .. | .. | 7 | 15,856 | 24 | 32,335 | 75 | 71,201 | 120 | 165,414 |
| Do. South | 3 | 703 | 20 | 36,043 | .. | .. | 9 | 989 | 1 | 90 | .. | .. | 56 | 32,194 | 1 | 30 | 3 | 6,620 | 70 | 39,923 | 12 | 8,195 | 105 | * 84,864 |
| Do. West | 2 | 1,800 | 14 | 33,055 | 1 | 620 | 3 | 285 | 5 | 1,340 | .. | .. | 38 | 16,119 | .. | .. | 26 | 17,371 | 73 | 35,735 | 14 | 11,877 | 103 | * 82,467 |
| Nellore .. .. | 1 | 1 | 11 | 1,181 | 1 | 50 | 12 | 1,682 | .. | .. | .. | .. | 10 | 1,427 | .. | .. | 5 | 1,460 | 28 | 4,619 | 1 | 1,000 | 41 | 6,801 |
| Chingleput .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 7 | 2 | 7 |
| Chittoor .. .. | 12 | 151 | 21 | 1,878 | 2 | 7 | 11 | 4,682 | .. | .. | 2 | 17 | 55 | 11,504 | 6 | 71 | 7 | 1,571 | 83 | 17,852 | 4 | 659 | 120 | 20,540 |
| Total .. | 32 | 35,738 | 103 | 116,526 | 8 | 856 | 117 | 31,284 | 8 | 1,694 | 6 | 65 | 229 | 103,725 | 8 | 1,251 | 74 | 56,250 | 450 | 195,125 | 321 | 182,469 | 906 | 529,858 |

* Includes area burnt in unprotected blocks.

## Appendix A.—Comparative statement of number and origin of fires that occurred during 1916-17—*cont.*

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire-traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | By intentional firing. | | | | | | Total. | | | | | |
| | | | | | By workmen employed in the forests by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Southern Circle.* | | | | | | | | | | | | | | | | | | | | | | | | |
| North Vellore .. | 1 | 1 | 8 | 776 | .. | .. | 3 | 815 | .. | .. | .. | .. | 10 | 1,036 | .. | .. | 23 | 1,709 | 36 | 3,560 | 53 | 3,728 | 98 | 8,065 |
| South do. .. | .. | .. | 2 | 114 | 2 | 43 | 2 | 8 | .. | .. | .. | .. | 20 | 2,193 | .. | .. | 12 | 1,302 | 36 | 3,546 | 15 | 486 | 53 | 4,146 |
| West do. .. | .. | .. | 2 | 10 | 1 | 35 | 1 | 45 | .. | .. | .. | .. | 3 | 94 | .. | .. | 8 | 541 | 13 | 715 | 7 | 197 | 22 | 922 |
| South Arcot .. | .. | .. | .. | .. | .. | .. | 5 | 28 | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 6 | 30 | 1 | 4 | 7 | 34 |
| North Salem .. | 5 | 165·05 | 7 | 785 | .. | .. | 46 | 2,629·30 | .. | .. | .. | .. | 4 | 385 | 1 | 25 | 5 | 260 | 56 | 3,299·30 | 10 | 279·85 | 78 | 4,529·20 |
| South do. .. | .. | .. | .. | .. | 2 | 25 | 10 | 417 | .. | .. | .. | .. | 5 | 117 | 1 | 15 | .. | .. | 18 | 574 | 36 | 1,015 | 54 | 1,589 |
| Trichinopoly .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 46 | 5 | 46 |
| Madura .. .. | .. | .. | 21 | 1,298 | 4 | 315 | 9 | 698 | .. | .. | .. | .. | 17 | 1,577 | 2 | 200 | 30 | 2,010 | 62 | 4,800 | 19 | 966 | 102 | 7,064 |
| Tinnevelly .. | 1 | 0·5 | 1 | 26 | 2 | 1·4 | 1 | 0·01 | .. | .. | 6 | 1,177·03 | 9 | 3,797 | 9 | 2,545·12 | .. | .. | 27 | 7,520·56 | 1 | 130 | 30 | 7,677·06 |
| Total .. | 7 | 166·55 | 41 | 3,009 | 11 | 419·4 | 77 | 4,640·31 | .. | .. | 7 | 1,179·03 | 68 | 9,199 | 13 | 2,785·12 | 78 | 5,822 | 254 | 24,044 86 | 147 | 6,851·85 | 449 | 34,072·26 |
| *Western Circle.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Mangalore, North. | 5 | 8 | 37 | 581 | 1 | 8 | 36 | 575 | .. | .. | .. | .. | 5 | 55 | 3 | 15 | 9 | 569 | 54 | 1,222 | 16 | 202 | 112 | 2,013 |
| Do. South. | 6 | 51 | 33 | 699 | .. | .. | 47 | 1,761 | .. | .. | .. | .. | 13 | 318 | 5 | 204 | 5 | 213 | 70 | 2,496 | 29 | 1,123 | 138 | 4,369 |
| Malabar, North .. | 2 | 4 | 2 | 143 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 147 |
| Do. South. † | 2 | 365 | 3 | 11 | .. | .. | 1 | * .. | .. | .. | .. | .. | .. | .. | 1 | * .. | .. | .. | 2 | .. | .. | .. | 7 | 376 |
| The Nilgiris † .. | 2 | 13 | 4 | 437 | .. | .. | 4 | 259 | .. | .. | .. | .. | 21 | 1,567 | .. | .. | .. | .. | 25 | 1,826 | 3 | 28 | 34 | 2,304 |
| Kollegal .. | 2 | 70 | 1 | 240 | 1 | 75 | 13 | 9,582 | .. | .. | .. | .. | 7 | 4,990 | .. | .. | 2 | 135 | 23 | 14,782 | 3 | 1,250 | 29 | 16,342 |
| Coimbatore, North. | 2 | 149 | 1 | 75 | .. | .. | 2 | 210 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1,546 | 4 | 1,756 | 71 | 23,001 | 78 | 24,981 |
| Do. Central. | 2 | 88 | 1 | 114 | 1 | 40 | 2 | 107 | 2 | 73 | .. | .. | 1 | 115 | .. | .. | 3 | 53 | 9 | 388 | 16 | 804 | 28 | 1,394 |
| Do. South. | .. | .. | 2 | 120 | 11 | 302 | 7 | 62 | .. | .. | .. | .. | 2 | 55 | .. | .. | 2 | 16 | 22 | 435 | 1 | 24 | 25 | 579 |
| Total .. | 23 | 748 | 84 | 2,420 | 14 | 425 | 112 | 12,556 | 2 | 73 | .. | .. | 49 | 7,100 | 9 | 219 | 23 | 2,532 | 209 | 22,905 | 139 | 26,432 | 455 | 52,505 |
| Grand total, Presidency. | 66 | 36,988 | 264 | 158,361 | 34 | 1,704 | 352 | 58,304 | 16 | 2,057 | 14 | 1,252 | 375 | 131,760 | 60 | 24,607 | 217 | 132,178 | 1,068 | 351,862 | 730 | 315,179 | 2,128 | 862,390 |
| Grand total for 1915-16. | 76 | 37,557 | 297 | 316,164 | 49 | 5,668 | 375 | 141,713 | 19 | 6,663 | 16 | 1,313 | 435 | 208,850 | 53 | 30,224 | 135 | 51,228 | 1,082 | 445,659 | 1121 | 533,959 | 2576 | 13,33,339 |

* Less than one acre. † Includes the number of fires in the areas not under special protection.

APPENDIX B.—Comparative statement of impounded cattle for 1916-17.

| District. | Number of cattle impounded. | | Average for three years ending 1916-17. |
|---|---|---|---|
| | 1915-16. | 1916-17. | |
| *Northern Circle.* | | | |
| Ganjam .. .. .. .. | 1,035 | 2,449 | 1,548 |
| Vizagapatam .. .. .. | 2,152 | 1,021 | 1,410 |
| Godavari, Upper .. .. .. | 336 | 610 | 413 |
| Do. Lower .. .. .. | 1,185 | 705 | 1,039 |
| Kistna .. .. .. .. | 4,355 | 4,544 | 4,146 |
| Kurnool, East .. .. .. | 7,284 | 9,352 | 8,533 |
| Do. South .. .. .. | 3,275 | 1,206 | 3,271 |
| Do. West .. .. .. | 9,865 | 5,310 | 8,925 |
| Total .. | 29,487 | 25,254 | 29,255 |
| *Central Circle.* | | | |
| Bellary .. .. .. .. | 12,424 | 8,366 | 11,520 |
| Anantapur .. .. .. .. | 13,789 | 10,705 | 11,623 |
| Guntur .. .. .. .. | 29,456 | 25,202 | 27,610 |
| Cuddapah, North .. .. .. | 1,466 | 4,644 | 14,790 |
| Do. South .. .. .. | 6,214 | 1,957 | |
| Do West .. .. .. | 8,503 | 7,216 | |
| Nellore .. .. .. .. | 9,769 | 6,534 | 10,494 |
| Chingleput .. .. .. .. | 6,033 | 4,120 | 6,158 |
| Chittoor .. .. .. .. | 7,165 | 6,672 | 7,607 |
| Total .. | 94,813 | 75,416 | 89,802 |
| *Southern Circle.* | | | |
| North Vellore .. .. .. | 8,149 | 7,185 | 7,774 |
| South do. .. .. .. | 3,865 | 3,672 | 3,863 |
| West do. .. .. .. | 1,184 | 2,694 | 2,570 |
| South Arcot .. .. .. | 9,224 | 7,487 | 13,958 |
| North Salem .. .. .. | 3,771 | 2,669 | 3,619 |
| South do. .. .. .. | 4,553 | 2,636 | 4,632 |
| Trichinopoly .. .. .. | 2,594 | 2,814 | 3,485 |
| Madura .. .. .. | 5,035 | 3,275 | 5,209 |
| Tinnevelly .. .. .. | 2,900 | 2,026 | 2,418 |
| Total .. | 41,275 | 34,458 | 47,528 |
| *Western Circle.* | | | |
| Mangalore, North .. .. .. | 332 | 541 | 388 |
| Do. South .. .. .. | 609 | 487 | 518 |
| Malabar, North .. .. .. | 15 | 36 | 44 |
| Do. South .. .. .. | * 64 | 85 | 77 |
| The Nilgiris .. .. .. | 1,034 | 895 | 963 |
| Kollegal .. .. .. .. | 2,187 | 861 | 2,026 |
| Coimbatore, North .. .. .. | 3,923 | 3,108 | 3,156 |
| Do. Central .. .. | 766 | 1,768 | 1,115 |
| Do. South .. .. .. | 1,048 | 603 | 746 |
| Total .. | 9,978 | 7,784 | 9,033 |
| Grand total, Presidency .. | 175,553 | 142,912 | 175,618 |

* Revised figure furnished by the District Forest Officer.

## ANNUAL FORM No. 65.

*Forest Department, Madras Presidency.*

Area of reserved forests and reserved lands during 1916-17.

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1916. | | Added during the year. | Excluded during the year. | Area on 30th June 1917. | | Area on 1st July 1916. | | Added during the year. | Excluded during the year. | Area on 30th June 1917. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Northern Circle.* | | | | | | | | | | | | | |
| Ganjām .. .. .. | 357,465 | 559 | 8 | .. | 357,473 | 559 | 41,408 | 65 | .. | 8 | 41,400 | 65 | 624 |
| Vizagapatam .. .. .. | 199,371 | 312 | .. | .. | 199,371 | 312 | 1,827 | (*a*) 2 | .. | .. | 1,327 | 2 | 314 |
| Gōdāvari, Upper .. .. | 274,864 | 429 | 2,847 | .. | 277,711 | 434 | 225,377 | 352 | .. | 4,818 | 220,559 | 344 | 778 |
| Do. Lower .. .. | 258,276 | 404 | 344 | .. | 258,620 | 404 | 47,955 | 75 | .. | .. | 47,955 | 75 | 479 |
| Kistna .. .. .. | 171,432 | 268 | 492 | (*c*) 1,476 | 170,448 | 266 | .. | .. | (*b*) 400 | .. | 400 | 1 | 267 |
| Kurnool, East .. .. | 640,302 | 1,000 | .. | .. | 640,302 | 1,000 | .. | .. | .. | .. | .. | .. | 1,000 |
| Do. South .. .. | 490,439 | 766 | .. | .. | 490,439 | 766 | .. | .. | .. | .. | .. | .. | 766 |
| Do. West .. .. | 555,071 | 867 | .. | (*c*) 992 | 554,079 | 866 | .. | .. | .. | .. | .. | .. | 866 |
| Total .. | 2,947,220 | 4,605 | 3,691 | 2,468 | 2,948,443 | 4,607 | 316,067 | 494 | 400 | 4,826 | 311,641 | 487 | 5,094 |
| *Central Circle.* | | | | | | | | | | | | | |
| Bellary .. .. .. | 396,444 | 619 | .. | (*c*) 9,392 | 387,052 | 605 | 40,000 | 63 | .. | .. | 40,000 | 63 | 668 |
| Anantapur .. .. .. | 480,660 | 751 | (*d*) 415 | (*c*) 1,590 | 479,485 | 749 | 451 | 1 | 12 | 415 | 48 | .. | 749 |
| Guntūr .. .. .. | 521,242 | 814 | .. | (*c*) 869 | 520,373 | 813 | .. | .. | .. | .. | .. | .. | 813 |
| Cuddapah, North .. .. | 424,863 | 664 | .. | .. | 424,863 | 664 | .. | .. | .. | .. | .. | .. | 664 |
| Do. South .. .. | 296,625 | 464 | (*e*) 1,348 | (*c*) 2,382 | 295,591 | 462 | 77 | .. | .. | 77 | .. | .. | 462 |
| Do. West .. .. | 436,379 | 682 | (*d*) 100 | (*f*) 2,300 | 434,179 | 678 | 2,047 | 3 | 27 | 100 | 1,974 | 3 | 681 |
| Nellore .. .. .. | 462,158 | 722 | (*d*) 38 | (*c*) 1,102 | 461,094 | 720 | 815 | 1 | 388 | 38 | 1,165 | 2 | 722 |
| Chingleput .. .. .. | 133,082 | 208 | .. | 864 | 132,218 | 207 | .. | .. | .. | .. | .. | .. | 207 |
| Chittoor .. .. .. | 531,875 | 831 | .. | (*c*) 168 | 531,705 | 831 | 42 | .. | .. | .. | 42 | .. | 831 |
| Total .. | 3,683,326 | 5,755 | 1,901 | 18,667 | 3,666,560 | 5,729 | 43,432 | 68 | 427 | 630 | 43,229 | 68 | 5,797 |

The area of 427 acres shown in column 10 relates to those notified under section 4 and 630 acres shown in column 11 were transferred to reserved forest.

(*a*) Includes 2·05 sq. miles of Karakavalasa leased forests and East and West blocks.
(*b*) Area renotified under section 26 by the Collector.
(*c*) Disafforested.
(*d*) Notified under section 16 of the Forest Act.
(*e*) Out of this, 77 acres were notified under section 16 and 1,271 acres represent excess area found on resurvey.
(*f*) One hundred and eighty acres were disafforested and 2,120 acres were handed over to Putlampatti Shrotriemdar.

## Area of reserved forests and reserved lands during 1916-17—*cont.*

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1916. | | Added during the year. | Excluded during the year. | Area on 30th June 1917. | | Area on 1st July 1916. | | Added during the year. | Excluded during the year. | Area on 30th June 1917. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Southern Circle.* | | | | | | | | | | | | | |
| North Vellore .. .. | (*a*) 304,793 | 476 | .. | 1,441 | 303,352 | 474 | 1,237 | 2 | .. | 18 | 1,219 | 2 | 476 |
| South do. .. .. | 254,039<br>(*c*) + 9,444<br>(*d*) − 2,430 | 408 | .. | .. | 261,053 | 408 | .. | .. | .. | .. | .. | .. | 408 |
| West do. .. .. | 209,930 | 328 | 23 | .. | 209,953 | 328 | 23 | .. | 224 | 23 | 224 | .. | 528 |
| South Arcot cum Tanjore. | 225,670<br>(*c*) — 9,444 | 338 | .. | .. | 216,226 | 338 | .. | .. | .. | .. | .. | .. | 338 |
| North Salem .. .. | 507,342<br>(*e*) + 4,166 | 799 | 425 | .. | 511,933 | 800 | 24,842 | 39 | 110 | 425 | 24,527 | 38 | 838 |
| South do. .. .. | 371,668<br>(*e*) − 4,166 | 574 | 13 | .. | 367,515 | 574 | 11,633 | 18 | .. | (*f*) 203 | 11,430 | 18 | 592 |
| Trichinopoly .. .. | 211,552<br>(*b*) + 89 | 331 | .. | .. | 211,641 | (*o*) 330 | 3,623 | 6 | 532 | .. | 4,155 | (*o*) 7 | 337 |
| Madura .. .. .. | 422,350 | 660 | .. | .. | 422,350 | 660 | 2 | .. | .. | .. | 2 | .. | 660 |
| Tinnevelly .. .. .. | 274,325 | 429 | .. | .. | 274,325 | 429 | 139 | .. | 101 | 137 | 103 | .. | 429 |
| Total .. | 2,779,328 | 4,343 | (*j*) 461 | (*k*) 1,441 | 2,778,348 | (*o*) 4,341 | 41,499 | 65 | 967 | 806 | 41,660 | (*o*) 65 | 4,406 |
| *Western Circle.* | | | | | | | | | | | | | |
| Mangalore, North .. .. | 232,047 | 362 | .. | .. | 232,047 | 362 | .. | .. | 14 | .. | 14 | .. | 362 |
| Do. South .. .. | 278,800 | 436 | .. | .. | 278,800 | 436 | .. | .. | .. | .. | .. | .. | 436 |
| Malabar, North .. .. | 168,076 | 263 | .. | .. | 168,076 | 263 | 22 | .. | .. | .. | 22 | .. | 263 |
| Do. South .. .. | 91,525 | 143 | (*l*) 590 | (*k*) 8 | 92,107 | 144 | 12,810 | 20 | 128<br>(*l*) 44 | .. | 12,982 | 20 | 164 |
| The Nilgiris .. .. | 303,924 | 475 | (*j*) 192 | (*k*) 6,672 | 297,444 | 465 | 51,212<br>(*m*) 2,918 | 80<br>5 | 77 | (*n*) 192<br>(*h*) 67 | 51,097<br>2,851 | 80<br>4 | 549 |
| Kollegal .. .. .. | 467,439 | 730 | (*j*) 254 | .. | 467,693 | 731 | 226<br>(*i*) 38 | .. | .. | (*n*) 254 | 10 | .. | 731 |
| Coimbatore, North .. | 586,172 | 916 | .. | .. | 586,172 | 916 | 659 | 1 | .. | .. | 659 | 1 | 917 |
| Do. Central .. | 232,330 | 363 | (*j*) 534 | (*k*) 1,118 | 231,746 | 362 | 642 | 1 | .. | (*n*) 534<br>(*g*) 14 | 94 | .. | 362 |
| Do. South .. | 290,740 | 454 | (*j*) 54 | .. | 290,794 | 454 | 54 | .. | .. | (*n*) 54 | .. | .. | 454 |
| Total .. | 2,651,053 | 4,142 | 1,624 | 7,798 | 2,644,879 | 4,133 | 68,581 | 107 | 263 | 1,115 | 67,729 | 105 | 4,238 |
| Grand total, Presidency . | 12,060,927 | 18,845 | 7,677 | 30,374 | 12,038,230 | 18,810 | 469,579 | 734 | 2,057 | 7,377 | 464,259 | 725 | 19,535 |

(*a*) Correct area in acres furnished by the District Forest officer.
(*b*) Addition due to adoption of areas as per revised boundary description of Vaiyampatty range reserves.
(*c*) Area transferred from South Arcot to South Vellore.
(*d*) Deduction of area on account of correct computation.
(*e*) Due to the transfer of Suriyamalai reserve from South Salem to North Salem.
(*f*) Of this 190 acres relating to Jarugumalai reserved land were thrown out at Settlement.
(*g*) Excluded from reservation.
(*h*) Toda patta lands transferred to reserved lands.
(*i*) Omitted from previous year's return.
(*j*) Notified under section 16.
(*k*) Disafforested.
(*l*) Rectification due to adoption of survey of India figures.
(*m*) Toda patta lands.
(*n*) Transferred to reserved forests.
(*o*) Revised figure furnished by Conservator.

## ANNUAL FORM No. 66.

*Forest Department, Madras Presidency.*

Progress made in Forest Settlements during the year 1916–17.

| Forest district. | Name of forest. | Area in square miles. | | | Cost during year. | | Entire cost per square mile of areas finally settled. | Government notification of settlement. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Finally settled during the year. | In hand at commencement of the year. | Taken in hand during the year. | In forest accounts. | In other accounts. | | Number. | Date. |
| | *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS. | | RS. | NO. | |
| Ganjam .. Vizagapatam. | Kriamba enclosure .. .. | 0·013 | (a) 0·013 | .. | .. | .. | .. | 216 | 12th April 1917. |
| | Chokkapad .. .. .. | 64·69 | 64·69 | .. | .. | .. | .. | 315 | 12th June 1917. |
| | .... | .. | .. | .. | .. | .. | .. | | .. |
| Godavari, Upper. | Busipakala .. .. .. | (b) .. | 1·88 | .. | .. | .. | .. | .. | .. |
| | Nugur .. .. .. .. | .. | 246·61 | .. | .. | .. | .. | .. | .. |
| | Pedamidisileru .. .. | .. | 96·48 | .. | .. | .. | .. | .. | .. |
| | Dhanukonda extension IV to Rekapalli hill reserve. | 1·53 | 1·53 | .. | .. | .. | .. | 327 | 28th June 1917. |
| | Korrajulagudem extension I in Valsugri reserve. | (c) .. | 1·93 | .. | .. | .. | .. | .. | .. |
| | Vandalurgondi extension I in Kansulur reserve. | 0·82 | 0·82 | .. | .. | .. | .. | 512 | 4th November 1916. |
| | Tulluvada extension V to Rekapalli hill reserve. | 0·50 | 0·50 | .. | .. | .. | .. | 512 | Do. |
| | Gummadakonda extension No. 3 to Rekapalli hill reserve. | 2·16 | 2·40 | .. | .. | .. | .. | 512 | Do. |
| Godavari, Lower. | Coringa extension .. .. | .. | 75·00 | .. | .. | .. | .. | .. | .. |
| Kistna .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, South. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, West. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 69·713 | 491·853 | .. | .. | .. | .. | .. | .. |
| | *Central Circle.* | | | | | | | | |
| Bellary .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Anantapur.. | Bhadrapur extension .. | 0·56 | 0·56 | .. | ..(d) | .. | .. | 1191,Rev. | 24th April 1917 |
| | Addition to Amagondapalaiyam. | .. | 0·02 | .. | 575 | .. | 28,750 | Awaiting orders. | |
| | Addition to Peddoddi reserve. | 0·09 | 0 09 | .. | 326 | .. | 3,622 | 167, Rev. | 22nd January 1917. |
| | Dadithota .. .. .. | .. | 0·06 | .. | .. | .. | .. | Awaiting orders. | |
| Guntur .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, South. | Thummalabylu .. .. | 0·12 | (e) 0·12 | .. | 548 | .. | 4,567 | 1075,Rev. | 12th May 1916. |
| | Palakonda .. .. .. | 0·16 | 0·16 | .. | .. | .. | .. | 1431,Rev. | 23rd June 1916. |
| Cuddapah, West. | Enclosures in Cuddapah Palakondas. | .. | .. | 0·03 | .. | .. | .. | .. | .. |
| | Certain fields in Surabu reserved forest. | .. | .. | 0·02 | .. | .. | .. | .. | .. |
| | Pentas in Palakondas .. | .. | 0·28 | .. | 1,980 | .. | 7,071 | .. | .. |
| | Putlampalli shrotriem forest.. | .. | 2·76 | .. | 11,082 | .. | 4,015 | .. | .. |
| | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. | Addition to Gudlur, South .. | 0·04 | 0·04 | .. | 804 | .. | 20,100 | .. | .. |
| | Kavali extension No. II .. | .. | 0·08 | .. | 754 | .. | 9,425 | .. | .. |
| | Cherlopalli addition .. .. | 0·02 | 0·02 | .. | — 18 | .. | .. | .. | .. |
| | Sriharikota enclosure.. .. | .. | 1·14 | .. | .. | .. | .. | .. | .. |
| | Addition to Bitragunta R.F. | .. | .. | (f) 0·07 | .. | .. | .. | .. | .. |
| | Addition to Prabhagiripatnam R. F. | .. | .. | 0·04 | .. | .. | .. | .. | .. |
| | Enclosures in Dachur .. | .. | .. | 0·085 | .. | .. | .. | .. | .. |
| | Yellaseri Block B .. .. | .. | .. | 0·025 | .. | .. | .. | .. | .. |
| | Kottapalam .. .. | .. | .. | 0·020 | .. | .. | .. | .. | .. |
| | Turupukam Cumpad .. .. | .. | .. | 0·030 | .. | .. | .. | .. | .. |
| | Teluguroyapuram .. .. | .. | .. | 0·025 | .. | .. | .. | .. | .. |
| | Rapur Veligonda B .. .. | .. | .. | 0·005 | .. | .. | .. | .. | .. |
| | Guvvadi, west .. .. .. | .. | .. | 0·080 | .. | .. | .. | .. | .. |
| | Udyagiri Durgam B .. .. | .. | .. | 0·010 | .. | .. | .. | .. | .. |
| | Udyagiri Yerrakondas .. | .. | .. | 0·040 | .. | .. | .. | .. | .. |
| | Tummalapenta, West .. | .. | .. | 0 015 | .. | .. | .. | .. | .. |
| | Tummalapenta, North .. | .. | .. | 0·005 | .. | .. | .. | .. | .. |
| | Chinna Annalur extension .. | .. | .. | 0·015 | .. | .. | .. | .. | .. |
| | Veligonda .. .. .. | .. | .. | 0·015 | .. | .. | .. | .. | .. |
| | Chagollu A. B.. .. .. | .. | .. | 0 030 | .. | .. | .. | .. | .. |
| | Ramapatam .. .. .. | .. | .. | 0·010 | .. | .. | .. | .. | .. |
| | Nandanavanam A .. .. | .. | .. | 0·015 | .. | .. | .. | .. | .. |
| | Nandanavanam B extension.. | .. | .. | 0·045 | .. | .. | .. | .. | .. |
| Chingleput. .. | Mogilicherla, west .. .. | .. | .. | 0·020 | .. | .. | .. | .. | .. |
| | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. | Addition to Gundlur reserve. | .. | 0·015 | .. | .. | .. | .. | .. | .. |
| | Addition to Ankalammakonda. | .. | 0·05 | .. | .. | .. | .. | .. | .. |
| | Total .. | 0·99 | 5·395 | 0·650 | 16,051 | .. | .. | .. | .. |

(a) The area of 0·13 square mile shown in the return for the previous year is incorrect.
(b) Wrongly shown in previous years as requiring settlement and will be eliminated next year.
(c) Reservation abandoned; will be eliminated next year.
(d) Paid before the year opened. (e) Revised figure. (f) Areas undergoing settlement.

## Progress made in forest settlements during the year 1916–17—*cont.*

| Forest district. | Name of forest. | Area in square miles. | | | Cost during year. | | Entire cost per square mile of areas finally settled. | Government notification of settlement. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Finally settled during year. | In hand at commencement of year. | Taken in hand during year. | In forest accounts. | In other accounts. | | Number. | Date. |
| | *Southern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS | | | | |
| North Vellore. | Karapet extension | .. | 0·0844 | .. | (*a*) 485 | .. | .. | .. | .. |
| | Sholavaram | .. | 0·0281* | .. | .. | .. | .. | .. | .. |
| | Shanankuppam | .. | 0·0042 | .. | .. | .. | .. | .. | .. |
| | Addition to Banavaram reserve. | .. | 0·0703 | .. | .. | .. | .. | .. | .. |
| | Tiruvallam plantation | .. | 0·6834 | .. | .. | .. | .. | .. | .. |
| | Virinjipuram ,, | .. | 0·4941 | .. | .. | .. | .. | .. | .. |
| | Ammundi ,, | .. | 0 2500 | .. | .. | .. | .. | .. | .. |
| | Vannivedu ,, | .. | 0·0898 | .. | .. | .. | .. | .. | .. |
| | Kelminnal ,, | .. | 0·2281 | .. | .. | .. | .. | .. | .. |
| West Vellore. | Singarapet extension (Survey Nos. 129 and 130 of Sembarai village). | 0·0348 | .. | .. | (*b*) 198 | .. | .. | 1171 Rev. | 23rd May 1916. |
| | Mambakam extension | .. | .. | 0·3500 | .. | .. | .. | G.O. Mis. 741 | 12th March 1917. |
| North Salem. | Batbanavadi extension | 0·6640 | .. | .. | (*c*) 44 | .. | .. | G.O. 533, Rev. | 21st February 1917. |
| | Hudaidurgam 4 blocks | .. | 38 | .. | .. | .. | .. | .. | .. |
| | Bevanurmalai 2nd extension. | .. | 0·0078 | .. | .. | .. | .. | .. | .. |
| | Kesurguli extension | .. | .. | 0·1734 | .. | .. | .. | G.O. 2275, Rev. | 3rd October 1916. |
| South Salem. | Arana | .. | 3 | .. | (*c*) 597 | .. | .. | .. | .. |
| | Thirthagiri | .. | 3 | .. | .. | .. | .. | .. | .. |
| | Jarugumalai | .. | 12 | .. | .. | .. | .. | .. | .. |
| | Thirumanur extension | 0·0200 | .. | .. | .. | .. | .. | G O. 2431, Rev. | 31st October 1916. |
| Trichinopoly. | Gundur | .. | 3·85 | .. | (*d*) 362 | .. | .. | .. | .. |
| | Ariyur shola block | .. | 1·81 | .. | .. | .. | .. | .. | .. |
| | Shelur extension | .. | .. | 0·8313 | .. | .. | .. | G.O. 2284, Rev. | 4th October 1916. |
| Madura. | Addition to Shengalvarayar reserve. | .. | 0·0039 | .. | (*e*) 347 | .. | .. | .. | .. |
| | Kuliratti enclosure | .. | 0·2147 | .. | .. | .. | .. | Since cancelled in G.O. 1972, Rev., 2nd July 1917. | |
| Tinnevelly. | A piece of land in Srivilliputtur ghaut forest. | .. | 0·0027 | .. | .. | .. | .. | .. | .. |
| | Karumandiamman shola and Mudangiar. | .. | .. | 0·1572 | .. | .. | .. | G.O 1811 | 21st June 1917. |
| | Total | 0·7188 | 63·8215 | 1·5119 | 2,033 | .. | .. | .. | .. |
| | *Western Circle.* | | | | | | | | |
| Mangalore, North. | Naravi extension No. VII | .. | .. | ·02 | .. | .. | .. | 132 | 12th March 1917. |
| Malabar, South. | Panakadan extension No. I | | .. | ·003 | | .. | .. | 487 | 1st Nov. 1916. |
| | Kottanikunnu | .. | .. | ·19 | .. | .. | .. | 278 | 14th June 1917. |
| The Nilgiris. | Benne addition No. III | ·135 | ·135 | .. | (*f*) 350 | .. | .. | 232 | 9th May 1917. |
| | Do. do. No. IV | ·098 | ·098 | .. | .. | .. | .. | | |
| | Kalmalai addition | ·064 | ·064 | .. | .. | .. | .. | | |
| | Naduhatti addition No. I | ·003 | ·003 | .. | .. | .. | .. | 157 | 13th March 1917. |
| | Rangaswami Peak | .. | 2·23 | .. | .. | .. | .. | .. | .. |
| | Arambi addition No. I | | | ·12 | .. | .. | .. | 150 | 19th March 1917. |
| Kollegal | Edayarhalli addition No. I | ·036 | ·036 | .. | .. | .. | .. | 291 | 22nd May 1916. |
| | Do. No. III | | ·016 | .. | .. | .. | .. | .. | .. |
| | Do. No. V | ·030 | ·030 | .. | .. | .. | .. | 292 | 22nd May 1916. |
| | Do. No. VI | ·160 | ·160 | .. | .. | .. | .. | 292 | Do. |
| | Do. No. VII | ·01 | ·01 | .. | .. | .. | .. | 239 | 5th May 1917. |
| | Chikkailuru addition No. I | ·103 | ·103 | .. | 396 | .. | .. | 201 | 24th April 1917. |
| | Chikkailuru extensions Nos. III and IV. | ·015 | ·051 | .. | .. | .. | .. | 281 | 22nd May 1916. |
| Coimbatore, North. | Enclosures in South Bargur reserve and its additions. | .. | ·160 | .. | .. | .. | .. | .. | .. |
| | Enclosures in North Bargur reserve and its additions. | .. | ·198 | .. | .. | .. | .. | .. | .. |
| | Enclosures in Gutialattur reserve. | .. | ·672 | .. | .. | .. | .. | .. | .. |
| Coimbatore, Central. | Sundapatti additions Nos. 2 to 19, (*h*). | ·83 | ·85 (*g*)—·02 | .. | 213 | .. | .. | 101 | 15th February 1917. |
| | Addition to Thadagam block No. IV. | .. | ·06 | .. | .. | .. | .. | .. | .. |
| | Thadagam additions Nos. 2 to 21. | .. | ·087 | .. | .. | .. | .. | .. | .. |
| Coimbatore, South. | .... | .. | .. | .. | (*i*)73,186 | .. | .. | .. | .. |
| | Additions to Anamalai reserve. | ·08 | ·08 | .. | .. | .. | .. | 332 | 19th June 1916. |
| | Total | 1·6 | 5·023 | ·333 | 74,145 | .. | .. | .. | .. |
| | Grand total, Presidency | 73 | 566 | 2 | 92,229 | .. | .. | .. | .. |

* Cancelled—vide B.P.F. 13, Mis., dated 10th January 1917.

(*a*) Includes Rs. 6 relating to acquisition of patta lands included in Amburdrug reserve under Land Acquisition Act.

(*b*) Includes Rs. 188 relating to compensation paid for the acquisition of 2·27 acres for the construction of a rest-house at Pudur in the Tripatur Javadis.

(*c*) Represents the cost of acquiring lands required for roads and buildings.

(*d*) Represents the cost of acquiring 36 acres of land in Arasadi-Arivithi reserve.

(*e*) Represents the amount of portion of compensation for lands taken up for A. Kombai Pillayarnatham and Sendurai Pillayarnatham forest roads.

(*f*) Fee awarded to the Hon'ble Mr. E. F. Barber for the expert evidence given by him in connection with the acquisition of the Mudumalai and Kumbarakolli leased forests.

(*g*) Excluded from reservation. (*h*) The entry of Nos. 2 to 20 in the previous year's return was an error for Nos. 2 to 1

(*i*) Supplemental compensation paid for the lands acquired for the Attapadi blocks Nos. V and VI.

## ANNUAL FORM No. 67.

*Forest Department, Madras Presidency.*

### Record of demarcation and maintenance of boundaries during 1916-17.

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of the year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Northern Circle.* | MILES. | MILES. | MILES. | MILES. | | MILES. | MILES. | RS. | RS. |
| Ganjam .. .. | (o) .. | (a)&(p) 1,168<br>10 | 190 | (q) 1,368 | .. | (r) 80 | (s) 1,448 | (t) .. | (u) 76<br>(b) 110 |
| Vizagapatam .. | 24 | (a) 540 | .. | 564 | .. | 19 | 583 | 359 | .. |
| | | | | | | | | | (b) 6 |
| Godavari, Upper .. | .. | 406 | .. | (o) 406 | .. | 143 | (o) 549 | .. | 239 |
| | | | | | | | | | (b) 1,140 |
| Do. Lower .. | .. | (a) 699<br>61 | 25 | 785 | .. | 51 | 836 | .. | 1,110 |
| | | | | | | | | | (b) 608 |
| Kistna .. .. | .. | (a) 455<br>4 | 93 | 552 | .. | 41 | (d) 593 | .. | 125 |
| | | | | | | | | | (b) 56 |
| Kurnool, East .. | .. | (a) 697 | 6 | 703 | .. | 48 | 751 | .. | 258 |
| Do. South .. | .. | (a) 520<br>81 | 28 | 629 | .. | 5 | 634 | .. | 258 |
| | | | | | | | | | (b) 128 |
| Do. West .. | .. | (a) 209<br>26 | 695 | 930 | .. | 100 | 1,030 | .. | 395 |
| Total .. | 24 | (a) 4,288<br>588 | 1,037 | 5,937 | .. | 487 | 6,424 | 359 | 2,461 |
| | | | | | | | | | (b) 2,048 |
| *Central Circle.* | | | | | | | | | |
| Bellary .. .. | 5 | (l) 3 | (l) 1,643 | 1,656 | 6 | .. | 1,662 | 95 | 82 |
| Anantapur .. .. | 14 | .. | 1,832 | 1,846 | .. | .. | 1,846 | 191 | 237 |
| Guntur .. .. | .. | (m) 12 | (m) 1,368 | 1,380 | .. | . | 1,380 | .. | 726 |
| Cuddapah, North .. | .. | 56<br>(a) 280 | 293 | 629 | .. | 13 | 642 | .. | 1,327 |
| Do. South .. | .. | 9<br>(a) 45 | 272 | 326 | .. | 40 | 366 | .. | 334 |
| Do. West .. | .. | 9<br>(a) 434 | 887 | 1,330 | .. | 22 | 1,352 | .. | 290 |
| Nellore .. .. | .. | (n) 1,981 | .. | 1,981 | .. | 84 | 2,065 | .. | 798 |
| Chingleput .. .. | .. | (n) 854 | .. | 854 | .. | .. | 854 | .. | 633 |
| Chittoor .. .. | .. | 1,447 | .. | 1,447 | .. | 59 | 1,506 | .. | 329 |
| Total .. | 19 | 4,376<br>(a) 759 | 6,295 | 11,449 | 6 | 218 | 11,673 | 286 | 4,756 |
| *Southern Circle.* | .. | (e) 1,117 | .. | 1,117 | .. | (e) 7 | (e) 1,124 | .. | (h) 37 |
| North Vellore .. | .. | (f) 704·98 | .. | 704·98 | .. | 14·5 | 719·48 | .. | 52 |
| South do. .. | .. | 482·5 | 20 | 502·5 | 6·5 | 13·5 | 522·5 | .. | .. |
| West do. .. | .. | (g) 1,133 | .. | 1,133 | .. | .. | 1,133 | .. | 31 |
| South Arcot .. .. | .. | 1,187 | (i) 161 | 1,348 | .. | 40 | 1,388 | .. | 729 |
| North Salem .. .. | 0·50 | 1,047 | (i) 77 | 1,124·5 | .. | 5 | 1,129·5 | .. | 582 |
| South do. .. .. | .. | 915 | 63 | 978 | 3 | 24 | 1,005 | .. | .. |
| Trichinopoly .. .. | 67 | 1,043 | (k) 390 | 1,500 | 59 | 178 | 1,737 | 2,953 | 75 |
| Madura .. .. | .. | 3 | 501 | 504 | .. | 14 | 518 | .. | 73 |
| Tinnevelly .. .. | | | | | | | | | |
| Total .. | 67·50 | (a) 6,547<br>1,085 | 1,212 | 8,911·98 | 68·5 | 296 | 9,276·48 | 2,953 | 1,579 |

(a) Cleared by forest subordinates free of cost.
(b) Represents cost of sign boards and cost of cutting other than boundary lines.
(c) Certain enclosures having been reserved, it is no longer necessary to maintain their boundaries; hence decrease.
(d) The decrease from the previous year's figures is due to the disafforestation of three reserves.
(e) Revised figures furnished by the District Forest Officer on account of disafforestation of certain blocks.
(f) 52·48 miles were transferred from South Arcot to South Vellore on account of transfer of certain reserves.
(g) Sixteen miles transferred to Public Works Department—vide B.P. Forest No. 375, Mis., dated 22nd December 1916.
(h) Includes Rs. 10 spent on demarcation of the 6 acres of the site for the construction of Thongamalai rest-house.
(i) The entry 406 in column 4 of the previous year's return is a mistake for 401.
(k) Nineteen miles were transferred from South Salem to North Salem on account of transfer of Suriamalai reserve.
(l) The difference between columns 3 and 4 and column 5 of the previous year's return is due to the disafforestation of 95 miles of reserves.
(m) The difference between columns 3 and 4 and column 5 of the previous year's return is due to the disafforestation of 12 miles of reserves.
(n) Due to disafforestation of 14 miles of reserves.
(o) Excludes 42 miles belonging to Parlakimedi Maliahs.
(p) Do. 505 do. do.
(q) Do. 547 do. do.
(r) Do. 14 do. do.
(s) Do. 561 do. do.
(t) Excludes Rs. 542 spent on new works in Parlakimedi Maliahs.
(u) Do. Rs. 4 spent on repairs in Parlakimedi Maliahs.

## Record of demarcation and maintenance of boundaries during 1916-17—*cont.*

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Western Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Mangalore, North .. | .. | 47 | 1,189 | 1,236 | .. | 103 | 1,339 | .. | 387 |
| Do. South .. | .. | 2 | 1,128 | 1,130 | 46 | 101 | 1,277 | .. | 34<br>(*f*) 40<br>(*g*) 17 |
| Malabar, North .. | 4 | (*a*) 162<br>(*b*) 32 | 980 | 1,178 | 16 | 36 | 1,230 | 367 | (*c*) 45<br>(*g*) 84 |
| Do. South .. | .. | 23<br>(*a*) 48 | 60 | 131 | 20 | 55 | 206 | .. | 258<br>(*c*) 35 |
| The Nilgiris .. .. | (*i*) 6 | 124 | 1,491<br>(*c*) — 50 | 1,574 | (*g*) 8 | 299 | 1,878 | 556 | 8,853<br>(*g*) 101 |
| Kollegal .. .. | .. | 24<br>(*a*) 45 | 101 | 170 | 226<br>(*d*) — 3 | 87 | 480 | .. | 721 |
| Coimbatore, North .. | 2 | 5<br>(*b*) 389 | 146 | 542 | 28 | 103 | 673 | 43 | 214<br>(*c*) 35 |
| Do. Central. | .. | 10<br>(*b*) 177 | 396<br>(*c*) — 12 | 571 | 27 | 50 | 648 | .. | 329<br>(*c*) 56<br>(*h*) — 18 |
| Do. South .. | .. | (*a*) 10<br>(*b*) 67 | 137 | 244 | .. | 52 | 266 | .. | 11 |
| Total .. | 12 | 235<br>(*a*) 265<br>(*b*) 665 | 5,566 | 6,743 | 368 | 886 | 7,997 | 966 | 11,152 |
| Grand total, Presidency. | 123 | 6,549<br>(*b*) 12,259 | 14,110 | 33,041 | 442 | 1,887 | 35,370 | 4,564 | 21,996 |

(*a*) Cleared for fire-protection, the cost being debited to A-viii (*f*).
(*b*) Cleared by subordinates free of cost.
(*c*) Length of boundaries of forests disafforested.
(*d*) Do. of enclosures transferred to reserved forests.
(*e*) Cost of construction of cairns, pillars, etc.
(*f*) Cost of demarcation of coupes.
(*g*) Cost of preliminary demarcation.
(*h*) Cash recovery of service payments.
(*i*) Four and a half miles of newly-cut district boundary between the Nilgiris and Coimbatore and 1½ miles, the boundaries of forests notified under section 16 of the Forest Act during the year.

## Annual Form No. 69.

*Forest Department, Madras Presidency.*

Progress made in working-plans during 1916–17.

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Area for which working-plans are not at present required. | Total forest area as in Form No. 65. |
|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | |
| *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Ganjām .. .. | 624 | .. | .. | .. | .. | .. | 624 |
| Vizagapatam .. | 145 | .. | 28 | .. | (a) 58 | (a) 83 | 314 |
| Godāvari, Upper .. | 58 | .. | 107 | .. | (b) 268 | (c) 345 | 778 |
| Do. Lower .. | 24 | 233 | 147 | .. | .. | 75 | 479 |
| Kistna .. .. | (d) 150 | .. | .. | .. | .. | (e) 117 | 267 |
| Kurnool, East .. | 147 | .. | (f) 195 | .. | (f) 658 | .. | 1,000 |
| Do. South .. | 685 | .. | 81 | .. | .. | .. | 766 |
| Do. West .. | 469 | .. | .. | .. | .. | (e) 397 | 866 |
| Total .. | 2,302 | 233 | 558 | .. | 984 | 1,017 | 5,094 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | .. | 64 | .. | 152 | 293 | 159 | 668 |
| Anantapur .. | (g) 425 | .. | .. | .. | 324 | .. | 749 |
| Guntūr .. .. | (h) .. | .. | 9 | 234 | 570 | .. | 813 |
| Cuddapah, North .. | (i) 62 | .. | .. | 41 | 557 | 4 | 664 |
| Do. South .. | (i) 107 | .. | .. | .. | 355 | .. | 462 |
| Do. West .. | (i) 23 | .. | 1 | .. | 657 | .. | 681 |
| Nellore .. .. | (g) 199 | 7 | 20 | .. | 496 | .. | 722 |
| Chingleput .. | (i) 2 | 84 | .. | 100 | .. | 21 | 207 |
| Chittoor .. .. | (i) 33 | .. | .. | 154 | 644 | .. | 831 |
| Total .. | 851 | 155 | 30 | 681 | 3,896 | 184 | 5,797 |
| *Southern Circle.* | | | | | | | |
| North Vellore .. | (j) 474 | 2 | .. | .. | .. | .. | 476 |
| South do. .. | 400 | .. | .. | .. | 8 | .. | (o) 408 |
| West do. .. | 328 | .. | .. | .. | .. | (p) .. | 328 |
| South Arcot .. | 156 | .. | (k) .. | 32 | 56 | 94 | 338 |
| North Salem .. | 161 / (l) + 6 | 96 | 366 | .. | 209 | .. | 838 |
| South do. .. | 505 / (l) − 6 | 2 | 73 | .. | 18 | .. | 592 |
| Trichinopoly .. | 184 | .. | (k) .. | 16 | 54 | 83 | 337 |
| Madura .. .. | 356 | (m) 3 | .. | .. | 301 | .. | 660 |
| Tinnevelly .. | 246 / (n) − 10 | .. | .. | .. | 17 | 176 | 429 |
| Total .. | 2,800 | 103 | 439 | 48 | 663 | 353 | 4,406 |
| | | | *Reserved forests.* | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, North. | 358 | .. | .. | .. | 4 | .. | 362 |
| Do. South. | 436 | .. | .. | .. | .. | .. | 436 |
| Malabar, North .. | 178 | .. | (s) .. | .. | 85 | .. | 263 |
| Do. South .. | 7 | .. | .. | .. | 96 | 37 | 140 |
| The Nilgiris .. | 107 | .. | .. | .. | 358 | .. | 465 |
| Kollegal .. .. | 53 | .. | 22 | .. | 160 | 496 | 731 |
| Coimbatore, North. | 239 | (r) 3 | .. | .. | 624 | .. | 916 |
| Do. Central. | 220 / (q) + 19 | .. | .. | .. | 24 | 99 | 362 |
| Do. South. | 76 | .. | .. | .. | 34 | 317 | 427 |
| Total .. | 1,743 | 3 | 22 | .. | 1,385 | 949 | 4,102 |

(a) Correct figures as reported by the District Forest Officer.

(b) The increase over previous year's figure is due to the constitution of additional areas as reserved forests.

(c) The decrease from the previous year's figure i due partly to transfer of areas from column 7 to column 6 and partly to the abandonment of proposed reserves.

(d) The increase over last year's figure is due to recomputation of areas.

(e) The difference between this and previous year's figure is due to the disafforestation of certain reserves.

(f) The difference between this and previous year's figure is due to the preparation of working plans for certain areas having been dropped for the present.

(g) Difference due to area disafforested.

(h) Due to cessation of the period covered by the working-plan.

(i) Due to cancellation of working-plans.

(j) The difference in area is due to the disafforestation of certain reserves during the year.

(k) The column is left blank, as the working-plan has to be revised with reference to the recent classification.

(l) Represents area of Suriamalai reserve transferred from South to North Salem.

(m) Three square miles shown in column 3 represent the area of Vandamalai-Rangamalai reserve transferred from Trichinopoly district and included in the revised working-plan sanctioned in B. P. Forest No. 136, dated 31st August 1916.

(n) An area of 10 square miles has been deducted being the area of old Sivasailam working circle. A new working circle is proposed and the old one cancelled.

(o) Fifteen square miles were transferred from South Arcot and 4 square miles deducted on account of correct computation of areas of reserves.

(p) The area is very small, being below $\frac{1}{25}$ of a square mile.

(q) Due to adoption of correct areas.

(r) Additional areas brought under the revision of working-plans.

(s) Fifty-three square miles shown in the last year's return have been expunged as no regular working-plan was prepared.

## Progress made in working-plans during 1916-17—*cont.*

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area, as in form No. 65. |
|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | |
| | | | *Reserved lands.* | | | | |
| *Western Circle*—cont. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Mangalore, North. | .. | .. | .. | .. | .. | * | * |
| Malabar, North .. | .. | .. | .. | .. | .. | * | * |
| Do. South .. | .. | .. | .. | .. | .. | * | * |
| The Nilgiris .. | .. | .. | .. | .. | 1 | (†) 7 | 8 |
| Kollegal .. .. | .. | .. | .. | .. | .. | * | * |
| Coimbatore, North. | .. | .. | .. | .. | 1 | .. | 1 |
| Do. Central. | .. | .. | .. | .. | .. | * | * |
| Total .. | .. | .. | .. | .. | 2 | 7 | 9 |
| | | | *Leased forests.* | | | | |
| Malabar, South .. | 24 | .. | .. | .. | .. | .. | 24 |
| The Nilgiris .. | 76 | .. | .. | .. | .. | .. | 76 |
| Coimbatore, South. | .. | .. | .. | 27 | .. | .. | 27 |
| Total .. | 100 | .. | .. | 27 | .. | .. | 127 |
| Grand total, W.C. | 1,843 | 3 | 22 | 27 | 1,387 | 956 | 4,238 |
| Grand total, Presidency. | 7,796 | 494 | 1,049 | 756 | 6,930 | 2,510 | 19,535 |

* Less than one square mile. (†) Includes 4 square miles of toda patta lands.

## ANNUAL FORM No. 70.

*Forest Department, Madras Presidency.*

Communications and Buildings during 1916-17.

| District. | Roads (including bridle-paths and culverts). New works. Length. | Roads (including bridle-paths and culverts). New works. Cost. | Roads (including bridle-paths and culverts). Repairs. Length. | Roads (including bridle-paths and culverts). Repairs. Cost. | Buildings. Cost of new works. | Buildings. Cost of repairs. | Other works. Cost of new works. | Other works. Cost of repairs. |
|---|---|---|---|---|---|---|---|---|
| *Northern Circle.* | M. F. CH. | RS. | M. F. CH. | RS. | RS. | RS. | RS. | RS. |
| Ganjam .. .. .. | 1 6 0 | 1,817 | 51 3 1 | (a) 1,716 | (i) 217 | (a)&(j)3,137 | 190 | .. |
| | | | | (b) — 121 | | (b) + 120 | (b) — 109 | |
| Vizagapatam .. .. | .. | 2 | 9 0 0 | 202 | 12 | 1,282 | .. | 8 |
| | | | | | | (b) + 6 | | |
| Godavari, Upper .. | 69 7 4 | ,999 | .. | .. | 115 | (a) 1,226 | — 58 | .. |
| Do. Lower .. | 23 4 0 | 254 | 63 2 0 | .. | 1,003 | (a) 3,786 | 809 | .. |
| | | | 63 2 0 | (a) 1,793 | | (b) + 140 | (b) + 1 | |
| Kistna .. .. .. | 1 4 0 | 3,032 | 21 0 0 | 879 | 20 | (a) 899 | .. | .. |
| Kurnool, East .. .. | 65 7 0 | 4,236 | 73 1 0 | 6,753 | 4,008 | (a) 1,341 | 1,123 | 438 |
| Do. South .. .. | .. | .. | 78 0 0 | 6,345 | 2,181 | (a) 1,268 | 277 | 149 |
| | | | | | | | | (b) — 2 |
| Do. West .. .. | 39 2 0 | 1,608 | 59 0 0 | 1,504 | 1,666 | 2,318 | 30 | 706 |
| | | | | (b) + 12 | | (b) + 6 | | |
| Total .. | 201 6 4 | 12,948 | 354 6 1 | 19,083 | 9,222 | 15,529 | 2,263 | 1,299 |
| *Central Circle.* | | | | | | | | |
| Direction .. .. .. | .. | .. | .. | .. | 53 | .. | .. | .. |
| Bellary .. .. .. | .. | .. | 24 0 0 | 203 | .. | 1,543 | .. | 5 |
| Anantapur .. .. | 0 6 0 | 112 | 2 5 0 | 89 | .. | 1,828 | .. | 41 |
| Guntur .. .. .. | .. | .. | 8 5 0 | 771 | 50 | 1,070 | .. | .. |
| Cuddapah, North .. | 7 5 0 | 1,014 | 7 0 0 | 183 | 3,093 | 877 | 66 | 20 |
| Do. South .. | 16 2 0 | 2,819 | 42 4 0 | 819 | 909 | 970 | 27 | .. |
| Do. West .. .. | 7 2 0 | 2,669 | 18 4 0 | 585 | 874 | 939 | 29 | .. |
| Nellore .. .. | 58 0 0 | 1,233 | .. | 33 | 1,627 | 548 | 452 | 18 |
| Chingleput .. .. | 5 1 0 | 442 | 23 2 0 | 592 | 207 | 508 | .. | 111 |
| Chittoor .. .. | 15 2 0 | 738 | 30 4 0 | 912 | 184 | 1,903 | 43 | .. |
| Total .. | 110 2 0 | 9,027 | 157 0 0 | 4,187 | 6,997 | 10,186 | 617 | 195 |
| *Southern Circle.* | | | | | | | | |
| Vellore, North .. .. | 4 0 0 | 2,253 | 16 0 0 | 1,780 | 3,578 | 501 | 164 | 110 |
| | | | | | | (c) + 502 | | |
| Do. South .. .. | .. | .. | 10 0 0 | 105 | 3,312 | 846 | 226 | 8 |
| | | | | | | (c) + 73 | | |
| Do. West .. .. | .. | (d) 10 | 8 0 0 | 575 | 2,860 | 309 | 161 | .. |
| | | | | | | (c) + 96 | | |
| South Arcot *cum* Tanjore. | .. | .. | 8 0 0 | 168 | .. | 776 | .. | 76 |
| | | | | | | (c) + 432 | | |
| Salem, North .. .. | .. | .. | 90 0 0 | 2,529 | 2,799 | 1,488 | 70 | 72 |
| | | | | | | (c) + 162 | | |
| Do. South .. .. | 9 0 0 | 342 | 43 0 0 | 1,009 | 4,189 | 442 | 211 | 47 |
| | | | | | | (c) + 545 | | |
| Trichinopoly .. .. | 2 0 0 | 521 | 98 0 0 | 1,689 | 2,500 | 497 | 189 | .. |
| | | | | | | (c) + 422 | | |
| Madura .. .. .. | 8 0 0 | 503 | 119 0 0 | 5,316 | 887 | 934 | 92 | 36 |
| | | | | | | (c) + 776 | | |
| Tinnevelly .. .. | 2 0 0 | 1,822 | 45 0 0 | 3,013 | 1,115 | 1,105 | .. | — 1 |
| Forest Engineer .. .. | 14 0 0 | 49,451 | | | | + 415 | | |
| | | (e)+1,338 | .. | .. | .. | .. | .. | .. |
| Total .. | 39 0 0 | 56,240 | 437 0 0 | 16,184 | 21,240 | 6,898 | 1,113 | 348 |
| | | | | | | (c)+ 3,423 | | |
| *Western Circle.* | | | | | | | | |
| Mangalore, North .. | 5 7 0 | 1,081 | 17 2 0 | 647 | 1,447 | 165 | 369 | 9 |
| | | | | | | * 130 | | |
| Do. South .. | 8 7 0 | 136 | 7 6 0 | 45 | 2,748 | 333 | 327 | 126 |
| Malabar, North .. .. | .. | (f) 41 | 99 5 0 | 2,330 | 3,845 | 569 | 11 | 82 |
| | | | | | | * 170 | | |
| Do. South .. .. | 16 2 0 | 2,590 | 48 3 0 | 1,367 | 2,434 | 965 | 194 | 108 |
| The Nilgiris .. .. | 14 6 0 | 9,996 | 58 6 0 | 2,798 | 2,486 | 1,757 | 322 | 1 |
| Kollegal .. .. .. | 2 0 0 | 1,132 | 48 0 0 | 3,369 | 1,352 | 850 | 8 | 41 |
| | | | | | | * 347 | | |
| Coimbatore, North .. | 2 4 0 | 2,406 | 46 7 0 | 7,516 | 3,657 | 1,292 | 196 | 57 |
| | | | | | | * 321 | | |
| Do. Central .. | .. | (g) 5 | 35 0 0 | 2,722 | 2,162 | 545 | .. | 25 |
| | | | | | | * 116 | | |
| Do. South .. | 1 2 0 | (h) 2,493 | 21 7 0 | (h)3,785 | 317 | 627 | .. | 165 |
| | | | | | | * 234 | | |
| Direction .. .. | .. | . | .. | .. | .. | 24 | .. | .. |
| Total .. | 51 4 0 | 19,880 | 383 4 0 | 24,579 | 20,448 | 8,445 | 1,427 | 614 |
| Grand total, Presidency .. | 402 4 4 | 93,095 | 1,332 2 1 | 64,033 | 57,907 | 44,481 | 5,420 | 2,456 |

* Cost of establishment.

(a) Includes cost of establishment.

(b) Added or subtracted to tally with the Accountant-General's audited figures.

(c) Represents pay of establishment. (d) Cost of alignment. (e) Cost of investigation of Amerdi-Nadanur road.

(f) Cost of providing mile and furlong posts.

(g) Cost of tracing a road.

(h) The difference of Rs. 372 between the figures shown in this and Form No. 80 is due to the adjustment of the wrong debit referred to in the last year's return.

(i) Excludes Rs. 8 spent on new works in the Parlakimedi Maliahs.

(j) Excludes Rs. 40 spent on repairs in the Paralakimedi Maliahs.

## Annual Form No. 71.

*Forest Department, Madras Presidency.*

Register of Breaches of Forest Rules during 1916–17.

| District. | | Cases pending from 1915–16. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Northern Circle.* | | | | | | | | | | | | | | | |
| Ganjam .. | A .. | (a) 34 | 3 | 76 | 14 | 12 | 105 | 139 | 103 | 327 | 11 | 48 | 114 | 375 | 25 |
| | B .. | (a) 25 | .. | 438 | 25 | 13 | 476 | 501 | .. | .. | 381 | 1,403 | 381 | 1,403 | 86 |
| | C .. | .. | 21 | 49 | .. | 1 | 71 | .. | .. | .. | * 34 | 113 | * 34 | 113 | .. |
| | Total .. | (b) 59 | (c) 24 | (d) 563 | (e) 39 | (f) 26 | (g) 652 | (h) 640 | (i) 103 | (j) 327 | (k) 392 * 34 | (l) 1,451 113 | (m) 495 * 34 | (n) 1 778 113 | (o) 111 |
| Vizagapatam. | A .. | (a) 25 | .. | 62 | 5 | 11 | 78 | 103 | 83 | 275 | 7 | 40 | 90 | 315 | 13 |
| | B .. | (a) 12 | 1 | 226 | 31 | 65 | 323 | 335 | .. | .. | 253 | 641 | 253 | 641 | 47 |
| | C .. | .. | 5 | 7 | 2 | 2 | 16 | .. | .. | .. | * 35 | 147 | * 35 | 147 | .. |
| | Total .. | 37 | 6 | 295 | 38 | 78 | 417 | 438 | 83 | 275 | 260 * 35 | 681 147 | 343 * 35 | 956 147 | 60 |
| Godavari, Upper. | A .. | 3 | .. | 14 | 1 | .. | 15 | 18 | 15 | 57 | 2 | 2 | 17 | 59 | 1 |
| | B .. | 18 | .. | 81 | 8 | 23 | 112 | 130 | .. | .. | 67 | 141 | 67 | 141 | 53 |
| | C .. | .. | 19 | .. | .. | .. | 19 | .. | .. | .. | * 10 | 24 | * 10 | 24 | .. |
| | Total .. | 21 | 19 | 95 | 9 | 23 | 146 | 148 | 15 | 57 | 69 * 10 | 143 24 | 84 * 10 | 200 24 | 54 |
| Godavari, Lower. | A .. | (a) 45 | .. | 35 | 6 | 8 | 49 | 94 | 70 | 268 | 13 | 52 | 83 | 320 | 11 |
| | B .. | (a) 53 | 1 | 299 | 25 | 13 | 338 | 391 | .. | .. | 322 | 653 | 322 | 653 | 52 |
| | C .. | .. | .. | 4 | .. | .. | 4 | .. | .. | .. | * 17 | 46 | * 17 | 46 | .. |
| | Total .. | 98 | 1 | 338 | 31 | 21 | 391 | 485 | 70 | 268 | 335 * 17 | 705 46 | 405 * 17 | 973 46 | 63 |
| Kistna .. | A .. | (a) 33 | .. | 66 | 56 | 2 | 124 | 157 | 108 | 527 | 31 | 70 | 139 | 597 | 18 |
| | B .. | (a) 31 | .. | 139 | 103 | 16 | 258 | 289 | .. | .. | 248 | 673 | 248 | 673 | 10 |
| | C .. | .. | .. | 22 | 10 | .. | 32 | .. | .. | .. | * 31 | 61 | * 31 | 61 | .. |
| | Total .. | 64 | .. | 227 | 169 | 18 | 414 | 446 | 108 | 527 | 279 * 31 | 743 61 | 387 * 31 | 1,270 61 | 28 |
| Kurnool, East. | A .. | (a) 7 | .. | 12 | 20 | 2 | 34 | 41 | 36 | 86 | 1 | 16 | 37 | 102 | 4 |
| | B .. | (a) 34 | 2 | 236 | 142 | 8 | 388 | 422 | .. | .. | 354 | 927 | 354 | 927 | 28 |
| | C .. | .. | .. | 11 | .. | .. | 11 | .. | .. | .. | * 40 | 116 | * 40 | 116 | .. |
| | Total .. | 41 | 2 | 259 | 162 | 10 | 433 | 463 | 36 | 86 | 355 * 40 | 943 116 | 391 * 40 | 1,029 116 | 32 |
| Kurnool, South. | A .. | (a) 33 | 2 | 41 | 5 | .. | 48 | 81 | 63 | 216 | 8 | 25 | 71 | 241 | 10 |
| | B .. | (a) 41 | .. | 272 | 53 | 4 | 329 | 370 | .. | .. | 314 | 778 | 314 | 778 | 28 |
| | C .. | .. | 10 | 36 | .. | .. | 46 | .. | .. | .. | * 28 | 91 | * 28 | 91 | .. |
| | Total .. | 74 | 12 | 349 | 58 | 4 | 423 | 451 | 63 | 216 | 322 * 28 | 803 91 | 385 * 28 | 1,019 91 | 38 |
| Kurnool, West. | A .. | 9 | .. | 54 | 28 | 1 | 83 | 92 | 71 | 203 | 2 | 11 | 73 | 214 | 19 |
| | B .. | 43 | 1 | 325 | 72 | 17 | 415 | 458 | .. | .. | 338 | 783 | 338 | 783 | 89 |
| | C .. | .. | 93 | 40 | .. | .. | 133 | .. | .. | .. | * 31 | 130 | * 31 | 130 | .. |
| | Total .. | 52 | 94 | 419 | 100 | 18 | 631 | 550 | 71 | 203 | 340 * 31 | 794 130 | 411 * 31 | 997 130 | 108 |
| Total, Northern Circle. | A .. | 189 | 5 | 360 | 135 | 36 | 536 | 725 | 549 | 1,959 | 75 | 264 | 624 | 2,223 | 101 |
| | B .. | 257 | 5 | 2,016 | 459 | 159 | 2,639 | 2,896 | .. | .. | 2,277 | 5,999 | 2,277 | 5,999 | 393 |
| | C .. | .. | 148 | 169 | 12 | 3 | 332 | .. | .. | .. | * 226 | 728 | * 226 | 728 | .. |
| Grand Total, Northern Circle. | | 446 | 158 | 2,545 | 606 | 198 | 3,507 | 3,621 | 549 | 1,959 | 2,352 * 226 | 6,263 728 | 2,901 * 226 | 8,222 728 | 494 |

(a) The difference between the closing balance of 1915–16 and opening balance of 1916–17 is due to transfer of cases from A to B.

* Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

(b) Excludes 97 cases appertaining to Parlakimedi Maliahs.
(c) Do. 3 do. do.
(d) Do. 294 do. do.
(e) Do. 23 do. do.
(f) Do. 13 do. do.
(g) Do. 333 do. do.
(h) Do. 430 do. do.
(i) Do. 53 cases convicted and 224 cases compounded by the Special Forest Officer, Parlakimedi Maliahs.
(j) Excludes 576 persons involved in the compounded cases and 150 persons involved in the convicted cases in the Parlakimedi Maliahs.
(k) Excludes 58 withdrawn cases and one acquitted case belonging to Parlakimedi Maliahs.
(l) Excludes 234 persons involved in the withdrawn cases and one person involved in the acquitted case belonging to Parlakimedi Maliahs.
(m) Excludes 336 cases belonging to the Parlakimedi Maliahs.
(n) Excludes 961 persons involved in 336 cases in Parlakimedi Maliahs.
(o) Excludes 94 pending cases in Parlakimedi Maliahs.

A = Cases taken to Court. B = Cases compounded. C = Cases undetected.

## Register of Breaches of Forest Rules during 1916-17—*cont.*

| District. | | Cases pending from 1915-16. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Central Circle.* | | | | | | | | | | | | | | | |
| Bellary .. | A .. | (a) 50 | .. | 102 | 61 | 8 | 171 | 221 | 195 | 461 | 23 | 82 | 218 | 543 | 3 |
| | B .. | (a) 98 | 2 | 295 | 306 | 11 | 614 | 712 | .. | .. | 581 | 1,164 | 581 | 1,164 | 79 |
| | C .. | .. | .. | 5 | 28 | .. | 33 | .. | .. | .. | (b) 52 | 141 | 52 | 141 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | 148 | 2 | 402 | 395 | 19 | 818 | 933 | 195 | 461 | 604 | 1,246 | 799 | 1,707 | 82 |
| | | | | | | | | | | | (b) 52 | 141 | 52 | 141 | |
| Anantapur. | A .. | 30 | 2 | 343 | 115 | 13 | 473 | 503 | 388 | 1,041 | 59 | 133 | 447 | 1,174 | 56 |
| | B .. | 186 | .. | 461 | 226 | 9 | 696 | 882 | .. | .. | 720 | 1,539 | 720 | 1,539 | 162 |
| | C .. | .. | 266 | 38 | 159 | .. | 403 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 216 | 268 | 842 | 500 | 22 | 1,572 | 1,385 | 388 | 1,041 | 779 | 1,672 | 1,167 | 2,713 | 218 |
| Guntur .. | A .. | 199 | .. | 225 | 330 | 6 | 561 | 760 | 539 | 1,716 | 21 | 89 | 660 | 1,805 | 200 |
| | B .. | 208 | .. | 541 | 753 | 14 | 1,308 | 1,516 | .. | .. | 1,269 | 3,500 | 1,269 | 3,500 | 163 |
| | C .. | .. | .. | 19 | .. | .. | 19 | .. | .. | .. | (b) 84 | 250 | 84 | 250 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | 407 | .. | 785 | 1,083 | 20 | 1,888 | 2,276 | 539 | 1,716 | 1,290 | 3,589 | 1,829 | 5,305 | 363 |
| | | | | | | | | | | | (b) 84 | 250 | 84 | 250 | |
| Cuddapah, North. | A .. | 37 | 1 | 101 | 31 | 2 | 135 | 172 | 162 | 379 | 9 | 17 | 171 | 396 | 1 |
| | B . | 73 | 4 | 387 | 154 | 12 | 557 | 630 | .. | .. | 489 | 1,331 | 489 | 1,331 | 101 |
| | C | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | (b) 40 | 128 | 40 | 128 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | (a) 110 | 5 | 489 | 185 | 14 | 693 | 802 | 162 | 379 | 498 | 1,348 | 660 | 1,727 | 102 |
| | | | | | | | | | | | (b) 40 | 128 | 40 | 128 | |
| Cuddapah, South. | A .. | 11 | .. | 31 | 14 | 1 | 46 | 57 | 52 | 122 | 4 | 9 | 56 | 131 | 1 |
| | B .. | 29 | 1 | 175 | 85 | 1 | 262 | 291 | .. | .. | 257 | 440 | 257 | 440 | 18 |
| | C .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (b) 16 | 80 | 16 | 80 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | (a) 40 | 1 | 206 | 99 | 2 | 308 | 348 | 52 | 122 | 261 | 449 | 313 | 571 | 19 |
| | | | | | | | | | | | (b) 16 | 80 | 16 | 80 | |
| Cuddapah, West. | A . | 45 | 3 | 53 | 27 | 30 | 113 | 158 | 114 | 326 | 15 | 46 | 129 | 372 | 29 |
| | B . | 28 | 1 | 189 | 83 | 88 | 361 | 389 | .. | .. | 287 | 733 | 287 | 733 | 65 |
| | C | .. | .. | 10 | .. | 6 | 16 | .. | .. | .. | (b) 37 | 104 | 37 | 104 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | (a) 73 | 4 | 252 | 110 | 124 | 490 | 547 | 114 | 326 | 302 | 779 | 416 | 1,105 | 94 |
| | | | | | | | | | | | (b) 37 | 104 | 37 | 104 | |
| Nellore .. | A .. | (a) 130 | 1 | 99 | 147 | 4 | 251 | 381 | 284 | 770 | 25 | 109 | 309 | 879 | 72 |
| | B .. | (a) 202 | 1 | 437 | 277 | 6 | 721 | 923 | .. | .. | 696 | 1,720 | 696 | 1,720 | 227 |
| | C .. | .. | .. | 21 | 39 | 2 | 62 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | (c) 332 | 2 | 557 | 463 | 12 | 1,034 | 1,304 | 284 | 770 | 721 | 1,829 | 1,005 | 2,599 | 299 |
| Chingleput. | A .. | (a) 154 | .. | 234 | 117 | 5 | 356 | 510 | 428 | 634 | 6 | 6 | 434 | 640 | 76 |
| | B .. | (a) 27 | .. | 461 | 350 | 25 | 836 | 863 | .. | .. | 787 | 1,389 | 787 | 1,389 | 28 |
| | C .. | .. | 2 | 3 | .. | .. | 5 | .. | .. | .. | (b) 48 | 83 | 48 | 83 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | 181 | 2 | 698 | 467 | 30 | 1,197 | 1,373 | 428 | 634 | 793 | 1,395 | 1,221 | 2,029 | 104 |
| | | | | | | | | | | | (b) 48 | 83 | 48 | 83 | |
| Chittoor .. | A .. | (a) 36 | .. | 47 | 26 | 15 | 88 | 124 | 101 | 186 | 19 | 45 | 120 | 231 | 4 |
| | B .. | (a) 60 | .. | 745 | 403 | 19 | 1,167 | 1,227 | .. | .. | 1,038 | 1,794 | 1,038 | 1,794 | 124 |
| | C .. | .. | 120 | .. | .. | .. | 120 | .. | .. | .. | (b) 65 | 127 | 65 | 127 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Total .. | | 96 | 120 | 792 | 429 | 34 | 1,375 | 1,351 | 101 | 186 | 1,057 | 1,839 | 1,158 | 2,025 | 128 |
| | | | | | | | | | | | (b) 65 | 127 | 65 | 127 | |
| Total, Central Circle. | A .. | 692 | 7 | 1,235 | 868 | 84 | 2,194 | 2,886 | 2,263 | 5,635 | 181 | 536 | 2,444 | 6,171 | 442 |
| | B .. | 911 | 9 | 3,691 | 2,637 | 185 | 6,522 | 7,433 | .. | .. | 6,124 | 13,610 | 6,124 | 13,610 | 967 |
| | C .. | .. | 328 | 97 | 226 | 8 | 659 | .. | .. | .. | (b) 342 | 913 | 342 | 913 | |
| | | | | | | | | | | | .. | .. | .. | .. | .. |
| Grand Total, Central Circle. | | (c) 1,603 | 344 | 5,023 | 3,731 | 277 | 9,375 | 10,319 | 2,263 | 5,635 | 6,305 | 14,146 | 8,568 | 19,781 | 1,409 |
| | | | | | | | | | | | (b) 342 | 913 | 342 | 913 | |

A = Cases taken into Court. B = Cases compounded by the District Forest Officer or Revenue Divisional Officer.
C = Cases undetected.

(a) Variations between the closing balance of 1915-16 and the opening balance of 1916-17 are due to transfer of cases between A and B and addition of case in Nellore.

(b) Cases withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer. (c) Revised figure.

## Register of Breaches of Forest Rules during 1916-17—*cont.*

| District. | | Cases pending from 1915-1916. | New cases of the year. | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Southern Circle.* | | | | | | | | | | | | | | | |
| North Vellore. | A .. | 39 | 2 | 118 | 58 | 1 | 179 | 218 | 98 | 299 | 10 | 25 | 108 | 324 | 110 |
| | B .. | 140 | .. | 666 | 379 | 19 | 1,064 | 1,204 | 1,033 | 2,089 | * 29 | * 85 | 1,033<br>* 29 | 2,089<br>85 | 142 |
| | C .. | .. | 96 | 1 | 5 | .. | 102 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 179 | 98 | 785 | 442 | 20 | 1,345 | 1,422 | 1,131 | 2,388 | 10<br>* 29 | 25<br>* 85 | 1,141<br>* 29 | 2,413<br>85 | 252 |
| South Vellore. | A .. | 49 | .. | 71 | 9 | 8 | 88 | 137 | 101 | 258 | * 1<br>* 5 | 4<br>* 16 | 102<br>* 5 | 262<br>* 16 | 30 |
| | B .. | 89 | 1 | 473 | 189 | 2 | 665 | 754 | 641 | 1,467 | * 11 | * 29 | 641<br>* 11 | 1,467<br>29 | 102 |
| | C .. | .. | 52 | 2 | .. | .. | 54 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | (a) 138 | 53 | 546 | 198 | 10 | 807 | 891 | 742 | 1,725 | 1<br>* 16 | 4<br>45 | 743<br>* 16 | 1,729<br>45 | 132 |
| West Vellore. | A .. | 34 | .. | 52 | 12 | 5 | 69 | 103 | 86 | 258 | 2<br>* 4 | 5<br>9 | 88<br>* 4 | 263<br>* 9 | 11 |
| | B .. | 37 | .. | 304 | 83 | 27 | 414 | 451 | 349 | 759 | * 21 | 66 | 349<br>* 21 | 759<br>* 66 | 81 |
| | C .. | .. | 22 | .. | .. | .. | 22 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total | 71 | 22 | 356 | 95 | 32 | 505 | 554 | 435 | 1,017 | 2<br>* 25 | 5<br>75 | 437<br>* 25 | 1,022<br>75 | 92 |
| South Arcot. | A .. | 400 | .. | 570 | 119 | 21 | 710 | 1,110 | 899 | 1,822 | 16<br>* 25 | 247<br>102 | 915<br>* 25 | 2,069<br>* 102 | 170 |
| | B .. | 326 | .. | 1,377 | 220 | 27 | 1,624 | 1,950 | 1,389 | 2,274 | * 65 | 130 | 1,389<br>* 65 | 2,274<br>130 | 496 |
| | C .. | .. | 7 | 50 | .. | .. | 57 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | (a) 726 | 7 | 1,997 | 339 | 48 | 2,391 | 3,060 | 2,288 | 4,096 | 16<br>* 90 | 247<br>232 | 2,304<br>* 90 | 4,343<br>232 | 666 |
| North Salem. | A .. | 35 | .. | 259 | 63 | 10 | 332 | 367 | 325 | 832 | 15 | 45 | 340 | 877 | 27 |
| | B .. | 248 | .. | 825 | 190 | 15 | 1,030 | 1,278 | 980 | 1,385 | * 73 | 258 | 980<br>* 73 | 1,385<br>258 | 225 |
| | C .. | .. | 78 | 18 | 2 | .. | 98 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 283 | 78 | 1,102 | 255 | 25 | 1,460 | 1,645 | 1,305 | 2,217 | 15<br>* 73 | 45<br>258 | 1,320<br>* 73 | 2,262<br>258 | 252 |
| South Salem | A .. | 187 | 1 | 146 | 33 | 6 | 186 | 373 | 291 | 1,383 | 20<br>* 37 | 107<br>205 | 311<br>* 37 | 1,490<br>* 205 | 25 |
| | B .. | 198 | .. | 514 | 99 | 39 | 652 | 850 | 567 | 1,325 | * 27 | 245 | 567<br>* 27 | 1,325<br>* 245 | 256 |
| | C .. | * | 53 | 6 | 2 | .. | 61 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 385 | 54 | 666 | 134 | 45 | 899 | 1,223 | 858 | 2,708 | 20<br>* 64 | 107<br>450 | 878<br>* 64 | 2,815<br>450 | 281 |
| Trichinopoly. | A .. | 200 | .. | 346 | 73 | 4 | 423 | 623 | 464 | 1,044 | 19<br>* 28 | 100<br>* 111 | 483<br>* 28<br>(b) 24 | 1,144<br>* 111<br>.. | 88 |
| | B .. | 237 | .. | 822 | 113 | 13 | 948 | 1,185 | 713 | 1,212 | *121 | 249 | 713<br>* 121 | 1,212<br>* 249 | 351 |
| | C .. | .. | 5 | 15 | .. | .. | 20 | .. | .. | .. | .. | .. | | | |
| | Total .. | 437 | 5 | 1,183 | 186 | 17 | 1,391 | 1,808 | 1,177 | 2,256 | 19<br>*149 | 100<br>360 | 1,196<br>* 149<br>(b) 24 | 2,356<br>360<br>.. | 439 |
| Madura .. | A .. | 544 | 3 | 710 | 99 | 22 | 834 | 1,378 | 1,207 | 4,732 | 46<br>* 14 | 203<br>77 | 1,253<br>* 14 | 4,935<br>* 77 | 111 |
| | B .. | 203 | 1 | 532 | 151 | 13 | 697 | 900 | 416 | 636 | 129<br>* 62 | 182<br>* 274 | 545<br>* 62 | 818<br>274 | 293 |
| | C .. | (c) 1 | 98 | 17 | .. | 1 | 116 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 748 | 102 | 1,259 | 250 | 36 | 1,647 | 2,278 | 1,623 | 5,368 | 175<br>* 76 | 385<br>351 | 1,798<br>* 76 | 5,753<br>351 | 404 |
| Tinnevelly. | A .. | 48 | 1 | 133 | 31 | 6 | 171 | 219 | 180 | 426 | 17 | 45 | 197 | 471 | 22 |
| | B .. | 98 | 1 | 546 | 229 | 7 | 783 | 881 | 739 | 1,454 | * 8 | * 15 | 739<br>* 8 | 1,454<br>15 | 134 |
| | C .. | .. | 28 | 4 | .. | .. | 32 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 146 | 30 | 683 | 260 | 13 | 986 | 1,100 | 919 | 1,880 | 17<br>* 8 | 45<br>15 | 936<br>* 8 | 1,925<br>15 | 156 |
| Total, Southern Circle. | A .. | 1,536 | 7 | 2,405 | 497 | 83 | 2,992 | 4,528 | 3,651 | 11,054 | 146<br>*113 | 781<br>520 | 3,797<br>* 113 | 11,835<br>520 | 594 |
| | B .. | 1,576 | 3 | 6,059 | 1,653 | 162 | 7,877 | 9,453 | 6,827 | 12,601 | 129<br>*417 | 182<br>1,351 | (b) 24<br>6,956 | 12,783 | 2,080 |
| | C .. | (c) 1 | 439 | 113 | 9 | 1 | 562 | .. | .. | .. | .. | .. | * 417 | 1,351 | |
| Grand Total, Southern Circle. | | 3,113 | 449 | 8,577 | 2,159 | 246 | 11,431 | 13,981 | 10,478 | 23,655 | 275<br>*530 | 963<br>1,871 | 10,753<br>* 530<br>(b) 24 | 24,618<br>1,871 | 2,674 |

(a) Includes 16 cases transferred from South Arcot to South Vellore.
(b) Cases transferred to Public Works Department.
(c) One undetected case was wrongly included in cases compounded and shown as balance last year.
* Cases withdrawn under the orders of the District Forest Officer or the Revenue Divisional Officer.

## Register of Breaches of Forest Rules during 1916-17—*cont.*

| District. | | Cases pending from 1915-16. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Western Circle.* | | | | | | | | | | | | | | | |
| Mangalore, North. | A .. | 10 | 11 | 62 | 11 | 8 | 92 | 102 | 57 | 205 | 11 | 22 | 68 | 227 | 34 |
| | B .. | 61 | 16 | 468 | 120 | 41 | 645 | 706 | .. | .. | 569 | 1,295 | 569 | 1,295 | 52 |
| | | | | | | | | | | | * 85 | 177 | 85 | 177 | |
| | C .. | .. | 80 | .. | .. | .. | 80 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 71 | 107 | 530 | 131 | 49 | 817 | 808 | 57 | 205 | 580 | 1,317 | 637 | 1,622 | 86 |
| | | | | | | | | | | | * 85 | 177 | 85 | 177 | |
| Mangalore, South. | A .. | 35 | 17 | 30 | 4 | 8 | 59 | 94 | 66 | 130 | 5 | 13 | 71 | 143 | 23 |
| | B .. | 55 | 44 | 337 | 62 | 41 | 484 | 539 | .. | .. | 448 | 807 | 448 | 807 | 72 |
| | | | | | | | | | | | * 19 | 41 | 19 | 41 | |
| | C .. | .. | 38 | .. | .. | .. | 38 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 90 | 99 | 367 | 66 | 49 | 581 | 633 | 66 | 130 | 453 | 820 | 519 | 950 | 95 |
| | | | | | | | | | | | * 19 | 41 | * 19 | 41 | |
| Malabar, North. | A .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| | | | | | | | | | | | * 1 | 7 | 1 | 7 | |
| | B .. | 2 | 4 | 26 | 4 | 3 | 37 | 39 | .. | .. | 31 | 42 | 31 | 42 | 2 |
| | | | | | | | | | | | * 6 | 25 | 6 | 25 | |
| | C .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 3 | 4 | 26 | 4 | 3 | 37 | 40 | .. | .. | 31 | 42 | 31 | 42 | 2 |
| | | | | | | | | | | | * 7 | 32 | 7 | 32 | |
| Malabar, South. | A .. | (a) 1 | .. | .. | .. | 1 | 1 | 2 | 2 | 4 | .. | .. | 2 | 4 | .. |
| | B .. | (a) 1 | .. | 4 | 6 | 33 | 43 | 44 | .. | .. | 30 | 42 | 30 | 42 | 12 |
| | | | | | | | | | | | * 2 | 21 | * 2 | 21 | |
| | C .. | .. | 2 | 2 | .. | 1 | 5 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 2 | 2 | 6 | 6 | 35 | 49 | 46 | 2 | 4 | 30 | 42 | 32 | 46 | 12 |
| | | | | | | | | | | | * 2 | 21 | * 2 | 21 | |
| The Nilgiris. | A .. | (a) 41 | .. | 28 | 41 | 15 | 84 | 125 | 98 | 250 | 1 | 4 | 99 | 254 | 26 |
| | B .. | (a) 15 | .. | 95 | 96 | 13 | 204 | 219 | .. | .. | 142 | 338 | 142 | 338 | 57 |
| | | | | | | | | | | | * 20 | 47 | * 20 | 47 | |
| | C .. | .. | 32 | .. | 1 | .. | 33 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 56 | 32 | 123 | 138 | 28 | 321 | 344 | 98 | 250 | 143 | 342 | 241 | 592 | 83 |
| | | | | | | | | | | | * 20 | 47 | * 20 | 47 | |
| Kollegal. | A .. | (a) 19 | .. | 25 | 14 | 1 | 40 | 59 | 48 | 113 | 10 | 84 | 58 | 147 | 1 |
| | B .. | (a) 10 | .. | 64 | 12 | 2 | 78 | 88 | .. | .. | 87 | 226 | 87 | 226 | 1 |
| | C .. | .. | 27 | 5 | 7 | 2 | 41 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 29 | 27 | 94 | 33 | 5 | 159 | 147 | 48 | 113 | 97 | 260 | 145 | 373 | 2 |
| Coimbatore, North. | A .. | 36 | 1 | 47 | 12 | 5 | 65 | 101 | 87 | 309 | 4 | 5 | 91 | 314 | 10 |
| | B .. | 42 | .. | 368 | 167 | 7 | 542 | 584 | .. | .. | 467 | 1,153 | 467 | 1,153 | 90 |
| | | | | | | | | | | | * 27 | 153 | * 27 | 153 | |
| | C .. | .. | 74 | .. | .. | .. | 74 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 78 | 75 | 415 | 179 | 12 | 681 | 685 | 87 | 309 | 471 | 1,158 | 558 | 1,467 | 100 |
| | | | | | | | | | | | * 27 | 153 | * 27 | 153 | |
| Coimbatore, Central. | A .. | (a) 48 | .. | 51 | 12 | 39 | 102 | 150 | 100 | 294 | 14 | 32 | 114 | 326 | 31 |
| | | | | | | | | | | | * 5 | 13 | * 5 | 13 | |
| | B .. | (a) 35 | 5 | 519 | 57 | 84 | 665 | 700 | .. | .. | 642 | 1,157 | 642 | 1,157 | 38 |
| | | | | | | | | | | | * 20 | 60 | * 20 | 60 | |
| | C .. | .. | 26 | 30 | 2 | .. | 58 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 83 | 31 | 600 | 71 | 123 | 825 | 850 | 100 | 294 | 656 | 1,189 | 756 | 1,483 | 69 |
| | | | | | | | | | | | * 25 | 73 | * 25 | 73 | |
| Coimbatore, South. | A .. | 23 | 2 | 32 | 2 | 16 | 52 | 75 | 68 | 216 | 2 | 5 | 70 | 221 | 5 |
| | B .. | 35 | .. | 135 | 40 | 51 | 226 | 261 | .. | .. | 257 | 677 | 257 | 677 | 4 |
| | C .. | .. | 23 | 3 | .. | .. | 26 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 58 | 25 | 170 | 42 | 67 | 304 | 336 | 68 | 216 | 259 | 682 | 327 | 898 | 9 |
| Total, Western Circle. | A .. | 214 | 31 | 275 | 96 | 93 | 495 | 709 | 526 | 1,521 | 47 | 115 | 573 | 1,636 | 130 |
| | | | | | | | | | | | * 6 | 20 | * 6 | 20 | |
| | B .. | 256 | 69 | 2,016 | 564 | 275 | 2,924 | 3,180 | .. | .. | 2,673 | 5,737 | 2,673 | 5,737 | 328 |
| | | | | | | | | | | | * 179 | 524 | * 179 | 540 | |
| | C .. | .. | 302 | 40 | 10 | 3 | 355 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Western Circle | | 470 | 402 | 2,331 | 670 | 371 | 3,774 | 3,889 | 526 | 1,521 | 2,720 | 5,852 | 3,246 | 7,373 | 458 |
| | | | | | | | | | | | * 185 | 544 | * 185 | 544 | |
| Total, Presidency. | A .. | 2,631 | 50 | 4,275 | 1,596 | 296 | 6,217 | 8,848 | 6,989 | 20,169 | 449 | 1,696 | 7,438 | 21,865 | 1,267 |
| | | | | | | | | | | | * 119 | 540 | * 119 | 540 | |
| | | | | | | | | | | | | | (b) 21 | | |
| | B .. | 3,000 | 86 | 13,782 | 5,313 | 781 | 19,962 | 22,962 | 6,827 | 12,601 | 11,203 | 25,528 | 18,030 | 38,129 | 3,768 |
| | | | | | | | | | | | * 1,164 | 3,516 | * 1,164 | * 3,516 | |
| | C .. | 1 | 1,217 | 419 | 257 | 15 | 1,908 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand total, Presidency. | | 5,632 | 1,353 | 18,476 | 7,166 | 1,092 | 28,087 | 31,810 | 13 816 | 32,770 | 11,652 | 27,224 | 25,468 | 59,994 | 5,035 |
| | | | | | | | | | | | * 1,283 | 4,056 | * 1,283 | 4,056 | |
| | | | | | | | | | | | | | (b) 24 | | |

A = Cases taken into Court. B = Cases compounded. C = Cases undetected.

(a) The variations between the closing balance of 1915-16 and these figures are due to transfers between heads A and B.

* Withdrawn under the orders of the District Forest Officer or Revenue Divisional Officer.

(b) Transferred to the Public Works Department.

## Annual Form No. 72.

*Forest Department, Madras Presidency.*

Area of forest tracts protected from fire during 1916–17.

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Northern Circle.* | ACS. | ACS. | ACS. | ACS. | RS. |
| Ganjam .. | Special protection .. | 85,231 | 86,440 | 53 | 86,387 | 4,872 |
| | General do. .. | 154,883 | 171,939 | 516 | 171,423 | 374 |
| | Total, Ganjam .. | (a) 240,114 | (b) 258,379 | (c) 569 | (d) 257,810 | (e) 5,246 |
| Vizagapatam. | Special protection .. | * 65,436 | 66,217 | 9 | 66,208 | 1,596 |
| | General do. .. | * 112,107 | 116,748 | 17 | 116,731 | 166 |
| | Total, Vizagapatam .. | 177,543 | 182,965 | 26 | 182,939 | 1,762 |
| Gōdāvari, Upper. | Special protection .. | 399,769 | 536,456 | 27,302 | 509,154 | † 7,873 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total, Gōdāvari, Upper.. | 399,769 | 536,456 | 27,302 | 509,154 | 7,873 |
| Gōdāvari, Lower. | Special protection .. | 203,420 | 211,454 | 268 | 211,186 | 4,657 |
| | General do. .. | 29,774 | 26,261 | 7 | 26,254 | 145 |
| | Total, Gōdāvari, Lower.. | 233,194 | 237,715 | 275 | 237,440 | 4,802 |
| Kistna .. | Special protection .. | 43,079 | 24,346 | 86 | 24,260 | 759 |
| | General do. .. | 1,609 | 26,582 | .. | 26,582 | 734 |
| | Total, Kistna .. | 44,688 | 50,928 | 86 | 50,842 | 1,493 |
| Kurnool, East. | Special protection .. | 102,392 | 201,516 | 34,330 | 167,186 | 10,513 |
| | General do. .. | 437,043 | 437,043 | 40,828 | 396,215 | 660 |
| | Total, Kurnool, East .. | 539,435 | 638,559 | 75,158 | 563,401 | 11,173 |
| Kurnool, South. | Special protection .. | 264,005 | 355,684 | 78,481 | 277,203 | 10,117 |
| | General do. .. | 126,007 | 134,755 | 12,282 | 122,473 | .. |
| | Total, Kurnool, South .. | 390,012 | 490,439 | 90,763 | 399,676 | 10,117 |
| Kurnool, West. | Special protection .. | 104,161 | 146,635 | 18,996 | 127,639 | 11,995 |
| | General do. .. | 366,636 | 407,444 | 32,467 | 374,977 | .. |
| | Total, Kurnool, West .. | 470,797 | 554,079 | 51,463 | 502,616 | 11,995 |
| Total .. | Special protection .. | 1,267,493 | 1,628,748 | 159,525 | 1,469,223 | 52,382 |
| | General do. .. | 1,228,059 | 1,320,772 | 86,117 | 1,234,655 | 2,079 |
| | Grand total .. | 2,495,552 | 2,949,520 | 245,642 | 2,703,878 | 54,461 |
| | *Central Circle.* | | | | | |
| Bellary .. | Special protection .. | 44,642 | 42,764 | 7,633 | 35,131 | 2,050 |
| | General do. .. | 796 | 2,972 | 793 | 2,179 | .. |
| | Total .. | 45,438 | 45,736 | 8,426 | 37,310 | 2,050 |
| Anantapur .. | Special protection .. | 360,701 | 371,372 | 80,759 | 290,613 | 4,479 |
| | General do. .. | 45,812 | 107,676 | 10,924 | 96,752 | .. |
| | Total .. | 406,513 | 479,048 | 91,683 | 387,365 | 4,479 |
| Guntūr .. | Special protection .. | 13,284 | .. | .. | .. | .. |
| | General do. .. | 20,984 | .. | .. | .. | .. |
| | Total .. | 34,268 | .. | .. | .. | .. |
| Cuddapah, North. | Special protection .. | 143,209 | 248,454 | 138,810 | 109,644 | 4,180 |
| | General do. .. | 97,813 | 142,336 | 26,604 | 115,732 | 987 |
| | Total .. | 241,022 | 390,790 | 165,414 | 225,376 | 5,167 |
| Cuddapah, South. | Special protection .. | 172,141 | 218,072 | 68,871 | 149,201 | 2,059 |
| | General do. .. | 36,406 | 45,278 | 13,207 | 32,071 | .. |
| | Total .. | 208,547 | 263,350 | 82,078 | 181,272 | 2,059 |
| Cuddapah, West. | Special protection .. | 191,620 | 214,691 | 57,225 | 157,466 | 2,495 |
| | General do. .. | 90,921 | 95,357 | 8,870 | 86,487 | 789 |
| | Total .. | 282,541 | 310,048 | 66,095 | 243,953 | 3,284 |

* The difference between the closing balance of the previous year and the opening balance of the year under report is due to transfer of areas from general to special protection and vice versa.

† Represents rewards for results of 1915–16.

(a) Excludes 100,192 acres belonging to Parlākimedi Maliahs.

(b) Do. 125,450 acres do. do.

(c) Do. 2,953 acres do. do.

(d) Do. 122,497 acres do. do.

(e) Do. 558 rupees spent on fire protection in the Parlākimedi Maliahs.

## Area of forest tracts protected from fire during 1916-17—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | | ACS. | ACS. | ACS. | ACS. | RS. |
| | *Central Circle*—cont. | | | | | |
| Nellore .. | Special protection .. | 125,422 | 136,843 | 6,801 | 130,042 | 1,486 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 125,422 | 136,843 | 6,801 | 130,042 | 1,486 |
| Chingleput.. | Special protection .. | 25,389 | 25,523 | 7 | 25,516 | 930 |
| | General do. .. | 107,442 | 106,695 | .. | 106,695 | .. |
| | Total .. | 132,831 | 132,218 | 7 | 132,211 | 930 |
| Chittoor .. | Special protection .. | 121,315 | 161,963 | 7,410 | 154,553 | 1,225 |
| | General do. .. | 386,799 | 369,742 | 13,130 | 356,612 | .. |
| | Total .. | 508,114 | 531,705 | 20,540 | 511,165 | 1,225 |
| Total .. | Special protection .. | 1,197,723 | 1,419,682 | 367,516 | 1,052,166 | 18,904 |
| | General do. .. | 786,973 | 870,056 | 73,528 | 796,528 | 1,776 |
| | Total .. | 1,984,696 | 2,289,738 | 441,044 | 1,848,694 | 20,680 |
| | *Southern Circle.* | | | | | |
| Vellore, North. | Special protection .. | 31,584 | 34,532 | 3,480 | 31,052 | 684 |
| | General do. .. | 259,737 | 268,762 | 4,585 | 264,177 | .. |
| | Total .. | 291,321 | 303,294 | 8,065 | 295,229 | 684 |
| Vellore, South. | Special protection .. | 43,570 | 100,997 | 1,296 | 99,701 | 337 |
| | General do. .. | 168,978 | 144,515 | 2,850 | 141,665 | (*a*) — 10 |
| | Total .. | 212,548 | 245,512 | 4,146 | 241,366 | 327 |
| Vellore, West. | Special protection .. | 56,185 | 101,285 | 56 | 101,229 | 42 |
| | General do. .. | 139,149 | 105,192 | 866 | 104,326 | .. |
| | Total .. | 195,334 | 206,477 | 922 | 205,555 | 42 |
| South Arcot *cum* Tanjore | Special protection .. | 13,536 | 13,541 | 2 | 13,539 | 338 |
| | General do. .. | 212,011 | 202,684 | 32 | 202,652 | .. |
| | Total .. | 225,547 | 216,225 | 34 | 216,191 | 338 |
| Salem, North | Special protection .. | 52,822 | 84,910 | 415 | 84,495 | 2,164 |
| | General do. .. | 460,579 | 354,949 | 4,114 | 350,835 | |
| | Total .. | 513,401 | 439,859 | 4,529 | 435,330 | 2,164 |
| Salem, South | Special protection .. | 196,843 | 244,184 | 916 | 243,268 | 1,912 |
| | General do. .. | 164,945 | 130,171 | 673 | 129,498 | .. |
| | Total .. | 361,788 | 374,355 | 1,589 | 372,766 | 1,912 |
| Trichinopoly. | Special protection .. | 87,872 | 88,355 | 18 | 88,337 | 1,118 |
| | General do. .. | 117,970 | 117,993 | 28 | 117,965 | .. |
| | Total .. | 205,842 | 206,348 | 46 | 206,302 | 1,118 |
| Madura .. | Special protection .. | 166,111 | 181,435 | 3,749 | 177,686 | 5,334 |
| | General do. .. | 228,748 | 240,915 | 3,315 | 237,600 | .. |
| | Total .. | 394,859 | 422,350 | 7,064 | 415,286 | 5,334 |
| Tinnevelly | Special protection .. | 34,100 | 35,377 | 2,392 | 32,985 | 4,764 |
| | General do. .. | 200,979 | 206,712 | 5,285 | 201,427 | .. |
| | Total .. | 235,079 | 242,089 | (*b*) 7,677 | (*b*) 234,412 | 4,764 |
| | Total, Special protection. | 682,623 | 884,616 | 12,324 | 872,292 | 16,693 |
| | Total, General protection. | 1,953,096 | 1,771,893 | 21,748 | 1,750,145 | (*a*) — 10 |
| | Grand total (Special and General protection). | 2,635,719 | 2,656,509 | 34,072 | 2,622,437 | 16,683 |

(*a*) Deducted as per Accountant-General's audited figure. (*b*) Corrected in the Board's office.

Area of forest tracts protected from fire during 1916–17—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Western Circle.* | ACS. | ACS. | ACS. | ACS. | RS. |
| Mangalore, North. | Special protection .. | 38,973 | 37,163 | 489 | 36,674 | 1,146 * + 381 |
| | General do. .. | 191,780 | 194,897 | 1,524 | 193,373 | 286 |
| | Total .. | 230,753 | 232,060 | 2,013 | 230,047 | 1,813 |
| Mangalore, South. | Special protection .. | 106,485 | 107,342 | 1,759 | 105,583 | 2,197 * + 295 |
| | General do. .. | 170,405 | 171,458 | 2,610 | 168,848 | 868 |
| | Total .. | 276,890 | 278,800 | 4,369 | 274,431 | 3,360 |
| Malabar, North. | Special protection .. | 134,679 | 139,089 | 147 | 138,942 | 6,237 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 134,679 | 139,089 | 147 | 138,942 | 6,237 |
| Malabar, South. | Special protection .. | 80,369 | 104,883 | 370 | 104,513 | 3,671 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 80,369 | 104,883 | 370 | 104,513 | 3,671 |
| The Nilgiris. | Special protection .. | 63,267 | 79,718 | 679 | 79,039 | 3,975 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 63,267 | 79,718 | 679 | 79,039 | 3,975 |
| Kollegal .. | Special protection .. | 65,708 | 39,340 | 767 | 38,573 | 2,885 |
| | General do. .. | 363,196 | 399,490 | 15,575 | 383,915 | .. |
| | Total .. | 428,904 | 438,830 | 16,342 | 422,488 | 2,885 |
| Coimbatore, North. | Special protection .. | 24,370 | 43,976 | 7,020 | 36,956 | 2,010 |
| | General do. .. | 299,032 | 542,196 | 17,961 | 524,235 | .. |
| | Total .. | 323,402 | 586,172 | 24,981 | 561,191 | 2,010 |
| Coimbatore, Central. | Special protection .. | 85,384 | 84,549 | 384 | 84,165 | 3,264 |
| | General do. .. | 136,381 | 147,197 | 1,010 | 146,187 | .. |
| | Total .. | 221,765 | 231,746 | 1,394 | 230,352 | 3,264 |
| Coimbatore, South. | Special protection .. | 45,338 | 47,522 | 151 | 47,371 | 2,142 |
| | General do. .. | 179,451 | 180,897 | 428 | 180,469 | .. |
| | Total .. | 224,789 | 228,419 | 579 | 227,840 | 2,142 |
| | Total, Special, Western Circle. | 644,573 | 683,582 | 11,766 | 671,816 | 28,203 |
| | Total, General, Western Circle. | 1,340,245 | 1,636,135 | 39,108 | 1,597,027 | 1,154 |
| | Grand total .. | 1,984,818 | 2,319,717 | 50,874 | 2,268,843 | 29,357 |
| | Grand total, Special protection. | 3,792,412 | 4,616,628 | 551,131 | 4,065,497 | 1,16,182 |
| | Presidency, General protection. | 5,308,373 | 5,598,856 | 220,501 | 5,378,355 | 4,999 |
| | Grand total, Presidency .. | 9,100,785 | 10,215,484 | 771,632 | 9,443,852 | 1,21,181 |

* Fire-tracing Mysore-South Kanara boundary.

## Annual Form No. 73.

*Forest Department, Madras Presidency.*

Area closed and open to grazing during 1916–17.

| District. | Closed to all animals. | | Open to grazing. | | | |
|---|---|---|---|---|---|---|
| | | | Of all animals. | | Of all animals except browsers (goats and sheep). | |
| | Whole year. | Part of year. | Whole year. | Part of year. | Whole year. | Part of year. |
| **Northern Circle.** | | | | | | |
| *Reserved forests.* | | | | | | |
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Ganjām | 81 | .. | (*a*) & (*e*) 478 | .. | .. | .. |
| Vizagapatam | 15 | .. | (*c*) 297 | .. | .. | .. |
| Gōdāvari, Upper | .. | .. | (*a*) 434 | .. | .. | .. |
| Do. Lower | 59 | .. | (*b*) 345 | .. | .. | .. |
| Kistna | 67 | 9 | (*a*) 190 | .. | .. | .. |
| Kurnool, East | 315 | .. | (*a*) 685 | .. | .. | .. |
| Do. South | 556 | .. | (*a*) 210 | .. | .. | .. |
| Do. West | 198 | .. | (*a*) 668 | .. | .. | .. |
| Total .. | 1,291 | 9 | 3,307 | .. | .. | .. |
| *Reserved lands.* | | | | | | |
| Ganjām | .. | .. | (*a*) 65 | .. | .. | .. |
| Vizagapatam | .. | .. | (*a*) 2 | .. | .. | .. |
| Gōdāvari, Upper | .. | .. | (*a*) 344 | .. | .. | .. |
| Do. Lower | .. | .. | (*a*) 75 | .. | .. | .. |
| Kistna | .. | .. | (*a*) 1 | .. | .. | .. |
| Kurnool, East | .. | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. | .. |
| Do. West | .. | .. | .. | .. | .. | .. |
| Total .. | .. | .. | 487 | .. | .. | .. |
| **Central Circle.** * | | | | | | |
| *Reserved forests.* | | | | | | |
| Bellary | 62 | .. | 543 | .. | .. | .. |
| Anantapur | 162 | 31 | 556 | 31 | .. | .. |
| Guntūr | 49 | .. | .. | 764 | .. | .. |
| Cuddapah, North | 72 | .. | 592 | .. | .. | .. |
| Do. South | 96 | .. | 366 | .. | .. | .. |
| Do. West | 47 | .. | 631 | .. | .. | .. |
| Nellore | 212 | .. | .. | 508 | .. | .. |
| Chingleput | 68 | 8 | 123 | 8 | .. | .. |
| Chittoor | 144 | .. | 687 | .. | .. | .. |
| Total .. | 912 | 39 | 3,498 | 1,311 | .. | .. |
| *Reserved lands.* | | | | | | |
| Bellary | 63 | .. | .. | .. | .. | .. |
| Cuddapah, West | 3 | .. | .. | .. | .. | .. |
| Nellore | 2 | .. | .. | .. | .. | .. |
| Total .. | 68 | .. | .. | .. | .. | .. |
| **Southern Circle.** † | | | | | | |
| *Reserved forests.* | | | | | | |
| North Vellore | 48 | .. | 426 | .. | .. | .. |
| South do. | 54 | .. | 354 | .. | .. | .. |
| West do. | 21 | .. | 307 | .. | .. | .. |
| South Arcot *cum* Tanjore | 36 | 23 | 279 | .. | .. | .. |
| North Salem | 95 | 1 | 704 | .. | .. | .. |
| South do. | 81 | .. | 493 | .. | .. | .. |
| Trichinopoly | 83 | .. | 248 | .. | .. | .. |
| Madura | 93 | .. | 567 | .. | .. | .. |
| Tinnevelly | 236 | 62 | 127 | .. | 2 | 2 |
| Total .. | 747 | 86 | 3,505 | .. | 2 | 2 |
| *Reserved lands.* | | | | | | |
| North Vellore | .. | .. | 2 | .. | .. | .. |
| West do. | .. | .. | (*d*) | .. | .. | .. |
| North Salem | .. | .. | 38 | .. | .. | .. |
| South do. | 6 | .. | 12 | .. | .. | .. |
| Trichinopoly | .. | .. | 6 | .. | .. | .. |
| Madura | .. | .. | (*d*) | .. | .. | .. |
| Total .. | 6 | .. | 58 | .. | .. | .. |

(*a*) Sheep are allowed to graze over the whole area. (*b*) Sheep are allowed to graze in 117 square miles.
(*c*) Sheep are allowed to graze in 295 square miles.
(*d*) Area omitted being less than a square mile.
(*e*) Excludes 196 square miles of forest area in Parlākimedi Maliahs, closed to goats only.

* *Note.*—Goats are entirely excluded from all the reserves of the circle except in portions of certain reserves used as artillery practice ground in Chingleput district and sheep are excluded in a portion of Guntūr district.

† Open to grazing of all animals except goats. Goat browsing is strictly prohibited in all districts in this circle.

Areas closed and open to grazing during 1916-17—*cont.*

| District. | Closed to all animals. | | Open to grazing. | | | |
|---|---|---|---|---|---|---|
| | | | Of all animals. | | Of all animals except browsers (goats and sheep). | |
| | Whole year. | Part of year. | Whole year. | Part of year. | Whole year. | Part of year. |
| **WESTERN CIRCLE.** | | | | | | |
| *Reserved forests.* | | | | | | |
| | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | | |
| Mangalore, North .. .. .. .. | 12 | .. | 350 | .. | .. | .. |
| Do. South .. .. .. .. | 1 | .. | 435 | .. | .. | .. |
| Malabar, North .. .. .. .. | 12 | .. | 251 | .. | .. | .. |
| Do. South .. .. .. .. | 144 | .. | .. | .. | .. | .. |
| The Nilgiris .. .. .. .. | 23 | .. | 442 | .. | .. | .. |
| Kollegal .. .. .. .. .. | 81 | .. | 650 | .. | .. | .. |
| Coimbatore, North .. .. .. .. | 45 | 2 | 867 | 2 | .. | .. |
| Do. Central .. .. .. | 137 | 38 | 137 | .. | .. | .. |
| Do. South .. .. .. .. | 85 | 2 | 367 | .. | .. | .. |
| Total .. | 540 | 42 | 3,549 | 2 | .. | .. |
| *Reserved lands.* | | | | | | |
| Mangalore, North .. .. .. .. | .. | .. | .. | .. | .. | .. |
| Malabar, North .. .. .. .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. .. .. | 20 | .. | .. | .. | .. | .. |
| The Nilgiris .. .. .. .. | 5 | .. | 79 | .. | .. | .. |
| Kollegal .. .. .. .. .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North .. .. .. .. | .. | .. | 1 | .. | .. | .. |
| Do. Central .. .. .. .. | .. | .. | .. | .. | .. | .. |
| Total .. | 25 | .. | 80 | .. | .. | .. |
| Grand total, Presidency .. | 3,589 | 176 | 14,484 | 1,343 | 2 | 2 |

* Less than one square mile.

ANNUAL

*Forest Department,*

Return of grazing in the

| Districts. | Grazing on payments. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| | | | | | Rs. | | | | | Rs. |
| NORTHERN CIRCLE. | | | | | | | | | | |
| Ganjam .. .. | .. | .. | .. | .. | .. | (a) (r)9,271 | (a)(s)33,962 | (a) S 126 | .. | (t) 9,856 |
| | | | | | | | | | Fodder grass. | 180 |
| Vizagapatam .. | (b) 237 | (b) 3,257 | (b) S 3,319 | .. | 1,348 | (a) 1,123 | (a) 16,348 | (a) S 832 | .. | 3,564 |
| Godavari, Upper.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | (d) 1,056 | (d) 442 | .. | .. | 958 | (e) 5,990 | (e) 5,226 | (e) S 170 | .. | 4,318 |
| | | | | | | | | | Fodder grass. | 120 |
| Kistna .. .. | (h) 309 | (h) 4,861 | (h)S 2,957 | .. | 4,582 | (a) 3,107 | (a) 16,427 | (a)S 12,892 | .. | 5,454 |
| | | (j) 1,973 | | | | | | | Fodder grass. | 246 |
| | | | | | | | | | Panchayat reserve. | 1,620 |
| Kurnool, East .. | (b) 3,438 | (b) 27,585 | (b) S 44,125 | .. | 29,332 | (a) 1,275 | (a) 5,494 | .. | .. | .. |
| | (k) 2,190 | (k) 12,956 | (k) S 110 | .. | .. | .. | .. | (a)S 27,675 | .. | 4,103 |
| Do. South .. | .. | .. | .. | .. | .. | (l) 560 | (l) 6,184 | (l) S 6,022 | Fodder grass. | 2,679 |
| | | | | | | | | | | 38 |
| Do. West .. | (b) 4,932 | (b) 12,975 | (b) S 14,772 | .. | 7,556 | | | | | |
| | (k) 47 | (k) 4,649 | (k) S 90 | .. | 4,746 | (a) 4,649 | (a) 35,989 | (a)S 73,825 | .. | 15,412 |
| Total .. | 12,209 | 68,698 | S 65,373 | .. | 48,522 | 25,975 | 119,630 | S 121,542 | .. | 47,490 |
| *Unreserved lands.* | | | | | | | | | | |
| Godavari, Upper.. | (c) 185 | (c) 3,334 | .. | .. | 1,134 | .. | .. | .. | .. | .. |
| Do. Lower.. | (d) 330 | (d) 45 | .. | .. | 264 | (e) 5,986 | (e) 8,245 | .. | .. | 5,054 |
| | | | | | | | | | Fodder grass. | 1,872 |
| Kistna .. .. | .. | .. | .. | .. | .. | (a) 800 | (a) 200 | (a) S 640 | .. | 397 |
| | | | | | | | | | Fodder grass. | 8 |
| Total .. | 515 | 3,379 | .. | .. | 1,398 | 6,786 | 8,445 | S 640 | .. | 7,331 |
| Grand total .. | 12,724 | 72,077 | S 65,373 | .. | 49,920 | 32,761 | 128,075 | S 122,182 | .. | 54,821 |
| CENTRAL CIRCLE. | | | | | | | | | | |
| Bellary .. .. | 39 | 85 | .. | .. | 61 | 11,655 | 46,281 | S 88,328 | .. | 21,329 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 2,000 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 11,825 |
| Anantapur .. | .. | .. | .. | .. | .. | 5,000 | 75,459 | S 184,372 | .. | 33,617 |
| | .. | .. | .. | .. | (a) .. | 128 | 1,440 | S 3,189 | | |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 2,298 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 605 |
| Guntur .. .. | (b) 5,835 | 59,718 | S 64,152 | .. | 77,598 | .. | .. | .. | Do. | 6,284 |
| | (c) 2,558 | 4,019 | S 31,454 | .. | 6,216 | | .. | .. | Fodder grass. | 1,793 |
| Cuddapah, North. | (d) 109 | 6,702 | S 925 | .. | 7,487 | 4,237 | 13,995 | S 53,568 | .. | 9,235 |
| | (e) .. | 353 | .. | | | | | | Penning fees. | 27 |
| | (f) .. | 19 | .. | | | | | | .. | 5,525 |
| Do. South. | (i) .. | 847 | .. | .. | 3,239 | 673 | 16,999 | S 22,248 | Penning fees. | 15 |
| | (j) .. | 2,632 | S 1,115 | | | | | | .. | 13,220 |
| Do. West. | (k) .. | 2,091 | .. | .. | 2,288 | 1,683 | 31,631 | S 71,021 | Penning fees. | 109 |
| | (l) .. | 210 | .. | | | .. | .. | .. | Panchayat fees. | 620 |
| | (m) .. | 30 | S 150 | | | | | | .. | 10 |
| Nellore .. .. | (o) .. | 1,323 | S 142 | .. | 348 | 26 | .. | .. | Kancha rent. | 1,07,509 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9,636 |
| Chingleput .. | (p) .. | .. | G 412 | .. | 103 | 2,085 | 25,896 | S 42,655 | Penning fees. | 10 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 2,609 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Kancha rent. | 2,209 |
| Chittoor .. | .. | .. | .. | .. | .. | 2,554 | 73,068 | S 57,720 | .. | 20,069 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 811 |
| Total .. | 8,541 | 78,029 | S 97,938 | .. | 97,340 | 28,041 | 284,769 | S 523,101 | .. | 2,51,865 |
| | | | G 412 | | | | | | | |

G = Goats. S = Sheep.

*Notes for N.C.*—(*a*) The full rates are 6 annas per buffalo, 3 annas per cow or bullock and 1 anna 6 pies per sheep.
(*b*) The enhanced rates are 8 annas per buffalo, 4 annas per cow or bull and 2 annas per sheep.
(*c*) The privileged rates in the Bhadrachallam taluk are 2 annas per buffalo, 1 anna per cow or bull and 6 pies per sheep.
(*d*) The enhanced rates are 12 annas per buffalo, and 6 annas per cow or bullock.
(*e*) The full rates are 8 annas per buffalo, 4 annas per cow or bullock and 1 anna and 6 pies per sheep.
(*f*) The privileged rates are 4 annas per buffalo, 2 annas per cow or bullock and 1 anna per sheep.
(*g*) The privileged rates are 1 anna per buffalo, cow or bull.
(*h*) The enhanced rates are 12 annas per buffalo, 6 annas per cow or bull and 1 anna and 6 pies per sheep.
(*j*) The enhanced rate is Re. 1 per plough bull.
(*k*) Do. Re. 1 per buffalo, cow or bull and annas 8 per sheep.
(*l*) The full rates are 8 annas per buffalo, 4 annas per cow or bull and 2 annas per sheep.
(*m*) The rates are 6 annas per buffalo, 3 annas per cow or bull and 1 anna and 6 pies per sheep.
(*o*) The enhanced rates are 8 annas per buffalo and 5 annas per bull or cow.
(*r*) Excludes 1,692 buffaloes belonging to Parlakimedi Maliahs.
(*s*) Do. 2,050 cows do.
(*t*) Excludes Rs. 1,019 realized as grazing fees in Parlakimedi Maliahs.

*Number of cattle grazed on payments.*

| | |
|---|---|
| Buffaloes .. .. .. .. .. .. | 61,240 |
| Cows and bullocks .. .. .. .. .. .. | 303,678 |
| Sheep .. .. .. .. .. .. .. | 223,406 |
| Grand total .. | 588,324 |

FORM No. 74.

*Madras Presidency.*

State forests during 1916–17.

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates. | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Total value of fees at full rates. | Grand total of value at full rates. |
| | | | | Actual. | Value at full rates. | | | | | | | | | | | | |
| (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 450 | 2,452 | S 277 | .. | 654 | 654 | 10,690 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,007 | .. | .. | 939 | 939 | 5,851 |
| (*e*) 5,012 | 26,036 | (*e*) S 8,937 | .. | 2,533 | 7,599 | .. | .. | .. | .. | .. | 5,021 | 49,501 | S1,254 | .. | 11,282 | 11,282 | 18,881 |
| (*f*) 929 | 11,320 | .. | .. | 2,657 | 7,576 | .. | .. | .. | .. | .. | 795 | 8,763 | .. | .. | 2,588 | 2,588 | 15,560 |
| (*g*) 570 | 15,593 | | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 11,902 |
| .. | .. | .. | .. | .. | .. | 647 | 716 | S 102 G5,211 | .. | 875 | .. | .. | .. | .. | .. | 875 | 34,310 |
| (*m*) 3,534 | (*m*) 14,262 | (*m*)S26,272 | .. | 6,462 | 8,616 | 2 | 26 | S 66 | .. | 12 | .. | .. | .. | .. | .. | 12 | 11,245 |
| .. | .. | .. | .. | .. | .. | .. | 1,491 | S3,303 | .. | 589 | .. | .. | .. | .. | .. | 589 | 28,303 |
| 10,045 | 67,211 | S 35,209 | .. | 11,652 | 23,791 | 649 | 2233 | S3,471 G5,211 | .. | 1,476 | 6,266 | 65,723 | 1,531 | .. | 15,463 | 16,939 | 1,36,742 |
| (*f*) 5,710 | (*f*) 36,315 | (*f*) S 642 | .. | 6,007 | 9,011 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16,145 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,190 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 405 |
| 5,710 | 36,315 | S 642 | .. | 6,007 | 9,011 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17,740 |
| 15,755 | 103,526 | S 35,851 | .. | 17,659 | 32,802 | 649 | 2,233 | 8,682 | .. | 1,476 | 6,266 | 65,723 | 1,531 | .. | 15,463 | 16,939 | 1,54,482 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35,215 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36,520 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 91,891 |
| (*g*) .. | 286 | .. | .. | 18 | 54 | .. | .. | .. | .. | .. | 190 | 45 | S 850 | .. | 159 | 159 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16,962 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | 678 | .. | .. | 127 | .. | .. | .. | .. | .. | .. | 8,906 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*h*) .. | 609 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| (*n*) .. | .. | S. 155 | .. | 64 | 129 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 16,366 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1,07,867 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | .. | 15 | 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14,582 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,880 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | 895 | S 155 | .. | 82 | 183 | .. | 678 | .. | .. | 127 | 190 | 126 | S 850 | .. | 174 | 174 | 3,49,189 |

*Notes for C.C.*—(1) The enhanced or special rates are—

Bellary .. .. As. 12 per buffalo, As. 6 per cow and As. 3 per sheep.

Guntur .. .. (*b*) Rs. 1-8-0 per buffalo, As. 12 per cow, and As. 6 per sheep.
(*c*) As. 8 per buffalo, As. 4 per cow and As. 2 per sheep.

Cuddapah North, (*d*) Rs. 1-8-0 per buffalo, Re. 1 per cow and As. 6 per sheep.
(*e*) As. 12 per cow.
(*f*) As. 8 per calf.
(*g*) Anna 1 per cow.

Do. South .. (*i*) Re. 1 per cow.
(*j*) As. 12 per cow and As. 6 per sheep.

Do. West .. (*h*) As. 1–6 per cow.
(*k*) Re. 1 per cow.
(*l*) As. 12 per cow.
(*m*) As. 6 per cow and As. 3 per sheep.
(*n*) Pies 9 per sheep.

Nellore .. .. (*o*) As. 4 per cow and As. 2 per sheep.

Chingleput .. (*p*) As. 4 per goat.

(2) The full rates are As. 6 per buffalo, As. 3 per cow and As. 1-6 per sheep.
(*a*) Half the full rates for half-year in Anantapur.

(3) The privileged rates are—
Cuddapah, North .. (*g*) Anna 1 per cow.
Do. West .. (*h*) Anna 1–6 per cow
(*n*) Pies 9 per sheep

*Forest Department, Madras*

Return of grazing in the

| District. | Grazing on payment. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| SOUTHERN CIRCLE. | | | | | RS. | | | | | RS. |
| Vellore, North .. .. | .. | .. | .. | .. | .. | 1,617 | 58,124 | 65,724 | .. | 17,666<br>(a) 3,505 |
| Do. South .. .. | .. | 10,063 | .. | .. | 2,516 | 3,697 | 50,272 | 26,985 | .. | (c) 13,369<br>(r) + 15 |
| Do. West .. .. | .. | 13,046 | .. | .. | 3,261 | 3,058 | 47,338 | 14,649 | .. | (d) 11,477 |
| South Arcot *cum* Tanjore. | .. | 168 | (g) 926 | .. | (q) 168 | 3,176 | 54,614 | 100,468 | .. | 20,850<br>(h) 374<br>(a) 385 |
| Salem, North .. .. | (n) 2,190 | (o) 76,926 | (p) 26,958 | .. | 25,454 | 53 | 16,163 | 7,882 | .. | 8,789<br>(k) 244 |
| Do. South .. .. | .. | (i) 38 | .. | .. | 14 | 673 | 77,526 | 23,390 | .. | 16,981<br>(j) 3<br>(k) 3<br>(l) 10 |
| Trichinopoly .. .. | (m) 104 | (m) 3,883 | (m) 11,361 | .. | 3,664 | 157 | 21,375 | 39,258 | .. | 7,747<br>(a) 9,957 |
| Madura .. .. | 452 | 60,682 | 46,868 | 322 | 21,336<br>(e) 1 | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | . | .. | .. | .. | .. | 732 | 18,787 | 18,072 | .. | 5,491<br>(a) 525<br>(f) 180<br>(r) —531 |
| Total .. | 2,746 | 164,806 | 86,113 | 322 | 56,414 | 13,163 | 344,199 | 296,428 | .. | 1,12,040 |
| WESTERN CIRCLE. | | | | | | | | | | |
| *Reserved Forests.* | | | | | | | | | | |
| Mangalore, North .. | .. | .. | .. | .. | .. | 2,042 | 17,322 | .. | .. | 4,014<br>(h) 2 |
| Do. South .. | .. | .. | .. | .. | . | 3,359 | 19,625 | .. | .. | 4,939 |
| Malabar, North .. .. | .. | .. | .. | .. | .. | 3,956 | 8,203 | .. | .. | 3,022 |
| Do. South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (a) 2 |
| The Nilgiris .. .. | .. | † 999 | .. | .. | 500 | 12,889<br>(h) 14 | 25,274<br>(b) 116 | S 2,142 | .. | 9,787<br>(a) 165 |
| Kollegal * .. .. | 3,119 | 69,524 | S 5,005 | .. | 19,566 | .. | .. | .. | .. | .. |
| Coimbatore, North † .. | 5,527 | 65,272 | S 21,308 | .. | 43,490<br>(k) 566<br>(a) 979 | .. | .. | .. | .. | .. |
| Do. Central .. | .. | .. | .. | .. | .. | 284 | 20,991 | S 13,640 | .. | 5,321<br>(a) 1,020<br>(c) 1,074<br>(i) 290 |
| Do South .. | .. | .. | .. | .. | .. | 370 | 8,861 | S 140 | (d) 1 | 1,823<br>(a) 164<br>(c) 335 |
| Total .. | 8,646 | 135,795 | 26,313 | .. | 65,101 | 22,914 | 100,392 | 15,922 | 1 | 31,958 |
| *Reserved Lands.* | | | | | | | | | | |
| The Nilgiris .. .. | .. | † 426 | .. | | 213 | 831 | 1,306 | .. | .. | (f) 557 |
| Total, Western Circle .. | .. | .. | | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Presidency.. | 32,657 | 451,133 | 276,149 | 322 | 2,68,988 | 97,710 | 858,741 | 957,633 | 1 | 4,50,741 |

*Notes for S.C.*—The enhanced or special rates are : buffaloes As. 8 ; cows bullocks or other animals As. 4 ; and sheep As. 2.
The full rates are As. 6 per buffalo, As. 3 per cow, bullock or other animal and As. 1-6 per sheep.
The privilege rates are half the full rates.

(a) Collection from panchayatdars.
(b) Free removal of grass.
(c) Includes excess collection of Rs. 27.
(d) Includes excess collection of Rs. 81.
(e) Fee for permit lost.
(f) Lease amount for grazing in Kavalkuttiparambu reserved forest.
(g) 310 sheep at 2½ annas each and 616 sheep at 2 annas each.
(h) Lease amount of grazing in certain reserves.
(i) At 6 annas each.
(j) Grazing assessment for the Malayali cattle on the Chitteris as per B.P. Forest No. 142, dated 6th October 1915.
(k) Penning license fee.
(l) Value of grass.
(m) The enhanced rates are double the full rates.
(n) 19 buffaloes at 1 rupee each and 2,171 buffaloes at 8 annas each.
(o) 6,294 cows at 8 annas each and 70,632 cows at 4 annas each.
(p) 1,395 sheep at 4 annas each and 25,563 sheep at 2 annas each.
(q) Includes excess collection of 4 annas.
(r) Added or subtracted to tally with Accountant-General's audited figure.

S = Sheep.

*Notes for W.C.*—The full rates are As. 6 per buffalo, As. 3 per cow, bullock or other animals and As. 1-6 per sheep.
* Annas 8 per buffalo, As. 4 per cow, bullock or other animals and As. 2 per sheep.
† Rupee 1 per buffalo, As. 8 per cow, bullock or other animals and As. 4 per sheep.

(a) Sale-proceeds of fodder grass.
(b) Calves, half rate.
(c) Revenue from reserves handed over to panchayat management.
(d) Elephants at Rs. 10.
(e) Annas 3 per 100 per diem.
(f) Buffaloes, cows, etc., brought for a cattle fair charged without distinction at a uniform rate of As. 2 per head.
(g) Elephant.
(h) Value of missing permits recovered.
(i) Revenue by lease of the right to graze in certain reserves.
(j) Includes Rs. 2 wrongly credited to II (e) instead of II (d)
(k) The difference between the ordinary and enhanced rates. The number of cattle concerned were included in the last year's return.

*Presidency.*

State forests during 1916–17—*cont.*

| Number of animals | | | | | | Grazing free. Number of animals. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates. | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| | | | | Fees received. | | | | | | | | | | | | |
| Buffaloes. (12) | Cows and bullocks. (13) | Sheep. (14) | Other animals. (15) | Actual. (16) | Value at full rates. (17) | Buffaloes. (18) | Cows and bullocks. (19) | Sheep. (20) | Other animals. (21) | Value of fees at full rates. (22) | Buffaloes. (23) | Cows and bullocks. (24) | Sheep. (25) | Other animals. (26) | Value of fees at full rates. (27) | Total value of fees at full rates. (28) | Grand total of value at full rates. (29) |
| | | | | Rs. | Rs. | | | | | | | | | | Rs. | Rs. | Rs. |
| 96 | 969 | .. | .. | 109 | 218 | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*b*) 2,304 | (*b*) 2,304 | 23,693 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 15,900 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14,738 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*b*) 19 | (*b*) 19 | 21,796 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 150 | .. | .. | 28 | 28 | 29,515 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 17,011 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21,368 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 356 | 3,033 | 192 | .. | 960 | 960 | 22,297 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,665 |
| 96 | 969 | .. | .. | 109 | 218 | .. | .. | .. | .. | .. | 356 | 3,183 | 192 | .. | 3,311 | 3,311 | 1,71,988 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4,016 |
| .. | .. | .. | (*f*)20,352 | 2,544 | (*f*)2,544 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,483 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (*g*) 1 | 91 | 91 | 3,113 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 |
| .. | (*e*) 5,814 | S 47,200(*e*) | .. | 202 | 5,515 | .. | .. | .. | .. | .. | 2,461 | .. | .. | .. | 923 | 923 | 16,890 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19,566 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 45,035 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7,705 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2,322 |
| .. | 5,814 | 47,200 | 20,352 | 2,746 | 8,059 | .. | .. | .. | .. | .. | 2,461 | .. | .. | 1 | 1,014 | 1,014 | 1,06,132 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 770 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15,851 | 111,204 | 83,206 | 20,352 | 20,596 | 41,262 | 649 | 2,911 | 8,682 | 0 | 1,603 | 9,273 | 69,032 | 2,573 | 1 | 19,962 | 22,438 | 764,816 |

## Abstract of animals licensed to graze on payment.

| Circle. | Buffaloes. | Bullocks and cows. | Sheep. | Goats. | Other animals. | Total. |
|---|---|---|---|---|---|---|
| Northern Circle .. .. .. | 61,240 | 303,678 | 223,406 | .. | .. | 588,324 |
| Central Circle .. .. .. .. | 36,582 | 363,693 | 621,194 | 412 | .. | 1,021,881 |
| Southern Circle .. .. .. | 16,005 | 309,974 | 382,541 | .. | 322 | 708,842 |
| Western Circle .. .. .. | 32,391 | 243,733 | 89,435 | .. | 20,353 | 385,912 |
| Grand Total, Presidency .. | 146,218 | 1,221,078 | 1,316,576 | 412 | 20,675 | 2,704,959 |

## ANNUAL FORM No. 75.

*Forest Department, Madras Presidency.*

### Area under artificial reproduction, 1916–17.

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1916. | Added during the year. | Exoluded during the year. | Area on 30th June 1917. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **NORTHERN CIRCLE.** | | | | | | | | | | |
| ***A.—Regular Plantations.*** | | | | | | | | | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Vizagapatam .. | 51 | .. | .. | 51 | 1 | .. | 1 | 5 | 174 | 3,259 |
| Gōdāvari, Lower .. | 342 | .. | 76 | 266 | .. | (*a*).. | 31,150 | 15,300 | 7,777 | 60,536 |
| Kistna .. .. | 88 | .. | 56 | 32 | .. | (*b*) 86 | 5,983 | 21,246 | 86,463 | 1,10,784 |
| Kurnool, East .. | 130 | .. | .. | 130 | .. | (*c*) 92 | 38,471 | 26,045 | .. | .. |
| Do. West .. | * 1,385 | 45 | .. | 1,430 | 3,888 | 6,468 | 2,92,254 | 61,218 | 1,947 | 17,398 |
| | (*d*) | (*e*) | | (*f*) | (*g*) | (*h*) | (*i*) | (*j*) | | |
| Total .. | 1,996 | 45 | 132 | 1,909 | 3,889 | 6,646 | 3,67,859 | †1,23,814 | 96,361 | † 1,92,477 |
| ***B.—Cultural Operations.*** | | | | | | | | | | |
| Vizagapatam .. | 39 | .. | .. | 39 | 2 | .. | ‡ 189 | .. | .. | .. |
| Gōdāvari, Lower .. | 2,402 | .. | .. | 2,402 | .. | .. | 2,359 | 1,032 | .. | .. |
| Kistna .. .. | 1,203 | 100 | 70 | 1,233 | 49 | 77 | 7,417 | 2,838 | 11,195 | 61,571 |
| Kurnool, East .. | 33 | .. | .. | 33 | .. | .. | † 9,886 | 3,561 | .. | .. |
| Do. South .. | 187 | .. | .. | 187 | .. | 854 | 4,069 | 2,390 | .. | .. |
| Do. West .. | * 3,458 | 250 | .. | 3,708 | 114 | 1,060 | 21,865 | 2,063 | .. | .. |
| Total .. | 7,322 | 350 | 70 | 7,602 | 165 | 1,991 | † 45,785 | †11,884 | 11,195 | † 61,571 |
| **CENTRAL CIRCLE.** | | | | | | | | | | |
| ***A.—Regular Plantations.*** | | | | | | | | | | |
| Bellary .. .. | 579 | .. | .. | 579 | .. | .. | 9,423 | 62,495 | 44 | 154 |
| Anantapur .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | 2,641 | .. | 634 | 2,007 | .. | .. | 48,286 | 32,344 | 26,973 | 64,820 |
| Cuddapah, North .. | 10 | .. | .. | 10 | .. | .. | 560 | .. | .. | .. |
| Do. South .. | 146 | .. | .. | 146 | .. | 258 | 23 | 609 | 316 | 3,042 |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | 3,960 | .. | 690 | 3,270 | .. | 257 | 1,56,705 | 16,772 | 5,272 | 6,40,964 |
| Chingleput .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | 60 | .. | .. | 60 | .. | 505 | .. | 1,131 | 28 | 47 |
| Total .. | 7,396 | .. | 1,324 | 6,072 | .. | 1,020 | 2,14,997 | 1,13,351 | 32,633 | 7,09,027 |
| ***B.—Taungya Plantations*—Nil.** | | | | | | | | | | |
| ***C.—Cultural Operations.*** | | | | | | | | | | |
| Bellary .. .. | 6,790 | .. | .. | 6,790 | .. | .. | 27,981 | 3,006 | .. | .. |
| Anantapur .. .. | 360 | 48 | 51 | 357 | 20 | 63 | § 344 | § 74 | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | 116 | .. | .. | 116 | .. | .. | .. | 129 | .. | .. |
| Chingleput .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | 308 | 50 | 5 | 353 | 89 | 104 | 186 | 178 | .. | .. |
| Total .. | 7,574 | 98 | 56 | 7,616 | 109 | 167 | 28,511 | 3,387 | .. | .. |
| Grand total .. | 14,970 | 98 | 1,380 | 13,688 | 109 | 1,187 | 2,43,508 | 1,16,738 | 32,633 | 7,09,027 |

* Revised figures furnished by District Forest Officer.

† Revised figures due to the exclusion of certain areas which are not under cultural operations.

‡ Excludes amount spent for maintaining gardens in bungalow compounds.

§ Corresponding deductions have been made in columns 9 and 10 owing to exclusion of area in column 5.

(*a*) Rs. 43 was spent for plantation in the Sudikonda rest-house.

(*b*) Exoludes Rs. 75 being the pay of malis employed in Collector's bungalow.

(*c*) Excludes Rs. 10 spent for seed potatoes planted in Marlapents.

(*d*) Do. 6½ acres belonging to Parlakimedi Maliahs.

(*e*) Do. 1½ acres do. do.

(*f*) Do. 8 acres do. do.

(*g*) Do. Rs. 33 spent in Parlakimedi Maliahs.

(*h*) Do. Rs. 72 do. do.

(*i*) Do. Rs. 50 do. do.

(*j*) Do. Rs. 399 do. do.

## Area under artificial reproduction, 1916–17—*cont.*

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1916 | Added during the year. | Excluded during the year. | Area on 30th June 1917. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **SOUTHERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| North Vellore .. | 1,831 | 5 | .. | 1,836 | 108 | 665 | 19,989 | 1,34,206 | 2,825 | 85,774 |
| Madura .. .. | 1,329 | .. | .. | 1,329 | .. | 660 | 60,763 | 7,637 | 261 | 4,881 |
| Tinnevelly .. | 5,322 | 5 | .. | 5,327 | 266 | .. | 6,634 | 1,756 | 2,872 | * 7,721 |
| Total .. | 8,482 | 10 | .. | 8,492 | 374 | 1,325 | 87,386 | 1,43,599 | 5,958 | 98,376 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| North Vellore .. | .. | 1 | .. | 1 | 1 | .. | 1 | .. | .. | .. |
| South Arcot .. | .. | 2 | .. | 2 | † .. | .. | .. | .. | .. | .. |
| Tinnevelly .. | 23 | .. | .. | 23 | 36 | .. | 47 | 13 | .. | .. |
| Total .. | 23 | 3 | .. | 26 | 37 | .. | 48 | 13 | .. | .. |
| *C.—Cultural Operations.* | | | | | | | | | | |
| North Vellore .. | 840 | 373 | 6 | 1,149 | 118 | .. | 184 | 98 | .. | 579 |
| South do. .. | 532 | 7,141 | (a) 532 | 7,141 | 297 | .. | 486 | .. | .. | .. |
| West do. .. | 299 | 1,068 | .. | 1,367 | 237 | .. | 357 | .. | .. | .. |
| South Arcot .. | 6,822 | 4 | .. | 6,826 | .. | .. | 496 | 2,779 | .. | .. |
| North Salem .. | 143 | .. | .. | 143 | 38 | .. | 8,966 | .. | .. | .. |
| South do. .. | 1,013 | 100 | .. | 1,113 | 191 | .. | 1,436 | 100 | .. | .. |
| Madura .. | .. | (b) .. | .. | .. | 27 | .. | 27 | .. | .. | .. |
| Tinnevelly .. | (c)4,000 | 17 | .. | 4,017 | 53 | 102 | (c) 5,524 | 6,304 | 48 | (c) 54 |
| Total .. | 13,649 | 8,703 | 596 | 21,756 | 961 | 102 | 17,476 | 9,281 | 48 | 633 |
| **WESTERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| Mangalore, South .. | 52 | .. | .. | 52 | .. | .. | 32 | 1,367 | .. | 516 |
| Malabar, North .. | § 379 | .. | .. | 379 | .. | 301 | 15,272 | 19,496 | 1,200 | 3,139 |
| Do. South .. | 6,474 | 45 | 8 | 6,511 | 1,148 | 5,509 | 5,39,268 | 5,45,492 | 1,69,905 | 21,80,989 |
| The Nilgiris .. | 1,743 | .. | .. | 1,743 | .. | 1,268 | 6,462 | 3,12,497 | 45,987 | 6,58,720 |
| Coimbatore, South .. | § 134 | .. | .. | 134 | .. | 34 | 9,947 | 4,622 | .. | .. |
| Total .. | 8,782 | 45 | 8 | 8,819 | 1,148 | 7,112 | 5,70,981 | 8,83,474 | 2,17,092 | 28,43,364 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| Malabar, North .. | § 593 | 42 | .. | 635 | .. | .. | .. | 10,828 | .. | .. |
| The Nilgiris .. | 19 | .. | .. | 19 | .. | 172 | 367 | 3,536 | .. | .. |
| Total .. | 612 | 42 | .. | 654 | .. | 172 | 367 | 14,364 | .. | .. |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Malabar, North .. | § 903 | 1,766 | .. | 2,669 | 916 | 209 | 3,407 | 7,647 | .. | .. |
| Kollegal .. .. | 7,050 | .. | .. | 7,050 | .. | .. | 455 | 149 | .. | .. |
| Coimbatore, North .. | 142 | 170 | 64 | 248 | 174 | 3 | 365 | 3 | .. | .. |
| Do. Central.. | 1,590 | .. | .. | 1,590 | .. | 38 | 1,882 | 181 | .. | .. |
| Do. South .. | 1,200 | 6 | .. | 1,206 | 15 | 134 | 2,785 | 1,513 | .. | .. |
| Total .. | 10,885 | 1,942 | 64 | 12,763 | 1,105 | 384 | 8,894 | 9,493 | .. | .. |
| Grand total, W.C. .. | 20,279 | 2,029 | 72 | 22,236 | 2,253 | 7,668 | 5,80,242 | 9,07,331 | 2,17,092 | 28,43,364 |
| Total A. Regular Plantations. | 26,656 | 100 | 1,464 | 25,292 | 5,411 | 16,103 | 12,41,223 | 12,64,238 | 352,044 | 38,43,244 |
| Total B. Taungya Plantations. | 635 | 45 | .. | 680 | 37 | 172 | 415 | 14,377 | .. | .. |
| Total C. Cultural operations. | 39,430 | 11,093 | 786 | 49,737 | 2,340 | 2,644 | 100,666 | 34,045 | 11,243 | 62,204 |
| Grand total, Presidency. | 66,721 | 11,238 | 2,250 | 75,709 | 7,788 | 18,919 | 13,42,304 | 13,12,660 | 3,63,287 | 39,05,448 |

* Rs. 4,849 has been omitted to be shown in this column in the previous year's return.
† Expenditure incurred in July 1917.
‡ Refers to disafforestations of Gudalur and Brahmana Katteri reserves.
§ Revised with reference to the instructions in B.P. Forest No. 49, dated 1st April 1916.
(*a*) This represents areas of felled coupes in which some desultory sowings were made prior to 1913–14. They are not areas of the kind such as those in sandalwood working circles where organised cultural operations are carried out, and the same are repeated until success is ensured. The area has therefore been excluded during the year as it should not get mixed up with figures in column 4.
(*b*) Dibbling of seeds round sholas. Area not known.
(*c*) Correct figures now furnished by the District Forest Officer.

ANNUAL

*Forest Department,*

Outturn (in thousands of cubic feet solid) of timber and fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | | | | | | | | | | | | | | | NORTHERN |
| | | | | | (*Thousands of cubic feet.*) | | | | | | | | | | *I. Reserved* |
| Ganjam .. .. | 1 | 34 | 3 | .. | 38 | 1 | 34 | 2 | .. | 37 | 5 | .. | .. | .. | 5 |
| Vizagapatam .. .. | 2 | .. | .. | .. | 2 | 3 | 5 | .. | .. | 8 | .. | .. | .. | .. | .. |
| Gōdāvari, Upper .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | 1 | 121 | 5 | .. | 127 | 2 | 5 | .. | .. | 7 | .. | .. | .. | .. | .. |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | 6 | 3 | .. | .. | 9 | 3 | .. | .. | .. | 3 | 1 | .. | .. | .. | 1 |
| Do. South .. .. | .. | 12 | 3 | .. | 15 | .. | 12 | 9 | .. | 21 | 13 | 4 | .. | .. | 17 |
| Do. West .. .. | 24 | .. | 2 | .. | 26 | 46 | 1 | 18 | 1 | 66 | .. | .. | .. | .. | .. |
| Total, Reserved forests. | 34 | 170 | 13 | .. | 217 | 55 | 59 | 29 | 1 | 144 | 19 | 4 | .. | .. | 23 |
| | | | | | | | | | | | | | | | *II. Unreserved* |
| Ganjam .. .. | .. | 17 | .. | 4 | 21 | 1 | 8 | .. | 54 | 63 | 4 | 9 | .. | .. | 13 |
| Vizagapatam .. .. | .. | .. | .. | .. | .. | .. | 43 | .. | .. | 43 | .. | .. | .. | .. | .. |
| Gōdāvari, Upper .. | 1 | 2 | .. | .. | 3 | 1 | 2 | 1 | .. | 4 | .. | .. | .. | .. | .. |
| Do. Lower .. | 1 | 340 | 14 | .. | 355 | 2 | .. | .. | .. | 2 | .. | 10 | .. | .. | 10 |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | .. | 20 | .. | .. | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | 2 | 379 | 15 | 4 | 400 | 4 | 55 | 1 | 54 | 114 | 4 | 19 | .. | .. | 23 |
| Grand total .. | (*d*) 36 | 549 | 28 | 4 | (*d*) 617 | (*a*) 59 | (*b*) 114 | 30 | 55 | (*c*) 258 | (*e*) 23 | 23 | .. | .. | (*e*) 46 |
| | | | | | | | | | | | | | | | CENTRAL |
| | | | | | | | | | | | | | | | *I. Reserved* |
| Bellary .. .. .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Anantapur .. .. | 2 | 1 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | 2 | 9 | .. | .. | 11 | .. | .. | .. | .. | .. |
| Nellore .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | 1 | 3 | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Reserved forests. | 3 | 4 | .. | .. | 7 | 4 | 9 | .. | .. | 13 | .. | .. | .. | .. | .. |
| | | | | | | | | | | | | | | | *II. Leased* |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | | | | | | | | | | | | | *III. Reserved* |
| | | | | | | | | | | | | | | | *IV. Unreserved* |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | 69 | .. | .. | 69 | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 155 | 2 | .. | 157 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | .. | 44 | .. | .. | 44 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | .. | 199 | 2 | .. | 201 | .. | 69 | .. | .. | 69 | .. | .. | .. | .. | .. |
| Grand total .. | 3 | 203 | 2 | .. | 208 | 4 | 78 | .. | .. | 82 | .. | .. | .. | .. | .. |

CENTRAL CIRCLE REMARKS.

*Reserved forests, Leased forest and unreserved lands—Timber and fuel—Government agency and Free grantees.*—Actuals.

*Timber and fuel—Purchasers.*—Estimates based on accounts furnished by purchasers in reserved forests and on money value realized in unreserved lands.

(*a*) Excludes 1,123 c.ft. belonging to Parlakimedi Maliahs.
(*b*) Do. 15,351 c.ft. do. do.
(*c*) Do. 16,474 c.ft. do. do.
(*d*) Do. 373 c.ft. do. do.
(*e*) Do. 367 c.ft. do. do.

FORM No. 76.

*Madras Presidency.*

during the year 1916–17 and agency of exploitation.

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | (*In thousands of cubic feet.*) | | | | | | | | | | |
| .. | .. | .. | .. | .. | 7 | 68 | 5 | .. | 80 | 7 | 158 | 1 | .. | 166 | 246 |
| .. | .. | .. | .. | .. | 5 | 5 | .. | .. | 10 | .. | 325 | .. | .. | 325 | 335 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 |
| .. | 4 | .. | .. | 4 | 3 | 130 | 5 | .. | 138 | .. | 1,977 | .. | .. | 1,977 | 2,115 |
| .. | 8 | 3 | .. | 11 | .. | 10 | 3 | .. | 13 | .. | 598 | .. | .. | 598 | 611 |
| .. | .. | .. | .. | .. | 10 | 3 | .. | .. | 13 | 7 | 4 | .. | .. | 11 | 24 |
| 1 | 46 | 4 | .. | 51 | 14 | 74 | 16 | .. | 104 | .. | 258 | 1 | .. | 259 | 363 |
| 1 | .. | .. | .. | 1 | 71 | 1 | 20 | 1 | 93 | 196 | 30 | .. | 154 | 380 | 473 |
| 2 | 58 | 7 | .. | 67 | 110 | 291 | 49 | 1 | 451 | 210 | 3,351 | 2 | 154 | 3,717 | 4,168 |
| *Lands.* | | | | | | | | | | | | | | | |
| 3 | 32 | .. | .. | 35 | 8 | 66 | .. | 58 | 132 | 3 | 84 | .. | 427 | 514 | 646 |
| .. | .. | .. | .. | .. | .. | 43 | .. | .. | 43 | .. | 59 | .. | .. | 59 | 102 |
| 1 | 22 | 1 | .. | 24 | 3 | 26 | 2 | .. | 31 | 8 | 79 | .. | .. | 87 | 118 |
| .. | .. | .. | .. | .. | 3 | 350 | 14 | .. | 367 | 39 | 338 | 1 | .. | 378 | 745 |
| .. | 87 | 7 | .. | 94 | .. | 87 | 7 | .. | 94 | .. | 154 | .. | .. | 154 | 248 |
| .. | .. | 2 | .. | 2 | .. | 20 | 2 | .. | 22 | .. | 4 | .. | .. | 4 | 26 |
| .. | 28 | .. | .. | 28 | .. | 28 | 1 | .. | 29 | .. | 84 | .. | .. | 84 | 113 |
| .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | .. | 211 | .. | .. | 211 | 213 |
| 4 | 169 | 10 | .. | 183 | 14 | 622 | 26 | 58 | 720 | 50 | 1,013 | 1 | 427 | 1,491 | 2,211 |
| 6 | 227 | 17 | .. | 250 | (*f*) 134 | (*g*) 913 | 75 | 59 | (*h*)1,171 | (*i*) 260 | (*j*) 4,364 | 3 | 581 | (*k*) 5,208 | (*l*) 6,379 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 6 | 329 | .. | .. | 335 | 336 |
| .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 3 | .. | 96 | .. | .. | 96 | 99 |
| 1 | 12 | .. | .. | 13 | 2 | 12 | .. | .. | 13 | .. | 506 | .. | .. | 506 | 519 |
| 2 | 6 | 6 | .. | 14 | 1 | 6 | 6 | .. | 14 | 3 | 365 | .. | .. | 368 | 382 |
| .. | 78 | .. | .. | 78 | 2 | 78 | .. | .. | 79 | 21 | 2,027 | .. | .. | 2,048 | 2,127 |
| .. | 14 | .. | .. | 14 | 2 | 23 | .. | .. | 25 | 12 | 1,070 | .. | .. | 1,082 | 1,107 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 549 | .. | .. | 550 | 550 |
| .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 4 | 1 | 138 | .. | .. | 139 | 143 |
| 1 | 21 | .. | .. | 22 | 1 | 21 | .. | .. | 22 | 10 | 397 | .. | .. | 407 | 429 |
| 4 | 131 | 6 | .. | 141 | 11 | 144 | 6 | .. | 161 | 54 | 5,477 | .. | .. | 5,531 | 5,692 |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 34 | .. | .. | 36 | 36 |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | 69 | .. | .. | 69 | .. | 192 | .. | .. | 192 | 261 |
| .. | .. | .. | .. | .. | .. | 155 | 2 | .. | 157 | .. | 142 | .. | .. | 142 | 299 |
| .. | 143 | 29 | .. | 172 | .. | 143 | 29 | .. | 172 | .. | 146 | .. | .. | 146 | 318 |
| .. | 9 | .. | .. | 9 | .. | 9 | .. | .. | 9 | .. | 105 | .. | .. | 105 | 114 |
| .. | 4 | .. | .. | 4 | .. | 4 | .. | .. | 4 | .. | .. | .. | .. | .. | 4 |
| .. | 17 | .. | .. | 17 | .. | 17 | .. | .. | 17 | .. | 250 | .. | .. | 250 | 267 |
| .. | 24 | 14 | .. | 38 | .. | 24 | 14 | .. | 38 | .. | 64 | .. | .. | 64 | 102 |
| .. | .. | 3 | .. | 3 | .. | 44 | 3 | .. | 47 | .. | 216 | .. | .. | 216 | 263 |
| .. | 207 | 5 | .. | 212 | .. | 207 | 5 | .. | 212 | .. | 204 | .. | .. | 204 | 416 |
| .. | 404 | 51 | .. | 455 | .. | 672 | 53 | .. | 725 | .. | 1,319 | .. | .. | 1,319 | 2,044 |
| 4 | 535 | 57 | .. | 596 | 11 | 816 | 59 | .. | 886 | 56 | 6,830 | .. | .. | 6,886 | 7,772 |

(*f*) Excludes 1,863 c.ft. belonging to Parlakimedi Maliahs
(*g*) Do. 15,351 c.ft. do. do.
(*h*) Do. 17,214 c.ft. do. do.
(*i*) Do. 32,700 c.ft. do. do.
(*j*) Do. 77,458 c.ft. do. do.
(*k*) Do. 110,158 c.ft. do. do.
(*l*) Do. 127,372 c.ft. do. do.

Outturn (in thousands of cubic feet solid) of timber and fuel

| District. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | | | | | | | | | | | | | | | SOUTHERN |
| | | | | | (*In thousands of cubic feet*). | | | | | | | | | | *I. Reserved* |
| Vellore, North .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 |
| Do. South .. .. | 1 | 1 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 |
| Madura .. .. .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 1 | 44 | .. | .. | 45 | .. | 8 | .. | .. | 8 | .. | 10 | .. | .. | 10 |
| Total .. | 6 | 45 | .. | .. | 51 | .. | 8 | .. | .. | 8 | 4 | 10 | .. | .. | 14 |
| | | | | | | | | | | | | | | | *II. Leased* |
| | | | | | | | | | | | | | | | *III. Reserved* |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | | | | | | | | | | | | | *IV. Unreserved* |
| Vellore, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | 3 |
| Do. South .. .. | 1 | .. | .. | .. | 1 | .. | 1 | 1 | .. | 2 | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | .. | .. | .. | .. | .. |
| Madura .. .. .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 1 | .. | 1 | .. | 2 | .. | 1 | 5 | .. | 6 | 3 | .. | .. | .. | 3 |
| | | | | | | | | | | | | | | | *Ab* |
| Vellore, North .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Arcot, South .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | .. | .. | .. | 5 |
| Do. South .. .. | 2 | 1 | .. | .. | 3 | .. | 1 | 1 | .. | 2 | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | 4 | 2 | .. | .. | .. | 2 |
| Madura .. .. | 2 | .. | 1 | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | 1 | 44 | .. | .. | 45 | .. | 8 | .. | .. | 8 | .. | 10 | .. | .. | 10 |
| Grand total .. | 7 | 45 | 1 | .. | 53 | .. | 9 | 5 | .. | 14 | 7 | 10 | .. | .. | 17 |
| | | | | | | | | | | | | | | | WESTERN |
| | | | | | | | | | | | | | | | *I. Reserved* |
| Mangalore, North .. | 4 | .. | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | 16 | 7 | .. | .. | 23 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Malabar, North .. | 4 | 3 | .. | .. | 7 | 1 | .. | .. | .. | 1 | 119 | 16 | .. | .. | 135 |
| Do. South .. | 9 | 14 | .. | .. | 23 | 7 | .. | .. | .. | 7 | .. | .. | .. | .. | .. |
| The Nilgiris .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Coimbatore, North .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Do. Central .. | 4 | .. | .. | .. | 4 | .. | 5 | .. | .. | 5 | .. | .. | .. | .. | .. |
| Do. South .. | .. | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 |
| Total .. | 38 | 27 | .. | .. | 65 | 8 | 5 | .. | .. | 13 | 124 | 16 | .. | .. | 140 |
| | | | | | | | | | | | | | | | *II. Leased* |
| Malabar, South .. | 130 | .. | .. | 4 | 134 | 39 | .. | .. | .. | 39 | .. | .. | .. | .. | .. |
| The Nilgiris .. | 25 | .. | .. | .. | 25 | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. |
| Coimbatore, South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Total .. | 155 | .. | .. | 4 | 159 | 42 | .. | .. | .. | 42 | 1 | .. | .. | .. | 1 |

SOUTHERN CIRCLE REMARKS.

*Timber and fuel—Government agency and free grantees.*—Actuals.
*Reserved forests—Purchasers—Timber*—Estimates based on the amounts realized.
*Reserved forests and reserved lands—Purchasers—Fuel.*—Estimates based chiefly on the accounts furnished by coupe contractors.
*Unreserved lands—Timber and fuel—Purchasers.*—Estimates based on the money value realized.

* Does not include the outturn of class VI forests the growth on which has been sold, as it has not yet been ascertained.

during the year 1916–17, and agency of exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | Total outturn. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | (32) |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | (*In thousands of cubic feet*). | | | | | | | | | | |
| .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | 12 | 148 | .. | .. | 160 | 161 |
| 5 | 1 | .. | .. | 6 | 6 | 1 | .. | .. | 7 | 1 | 182 | .. | .. | 183 | 190 |
| 5 | 8 | .. | .. | 13 | 5 | 8 | .. | .. | 13 | .. | 97 | .. | .. | 97 | 110 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 118 | 1 | .. | 121 | 121 |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | 86 | .. | .. | 86 | 88 |
| .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. | 335 | .. | .. | 335 | 337 |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | 8 | 20 | .. | .. | 28 | 30 |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | 1 | 582 | .. | .. | 583 | 585 |
| .. | 38 | .. | .. | 38 | 1 | 100 | .. | .. | 101 | 5 | 948 | .. | .. | 953 | 1,054 |
| 10 | 47 | .. | .. | 57 | 20 | 110 | .. | .. | 130 | 29 | 2,516 | 1 | .. | 2,546 | 2,676 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31 | .. | .. | 31 | 31 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 131 | 1 | .. | 132 | .. | 131 | 1 | .. | 132 | .. | 458 | .. | .. | 458 | 590 |
| .. | 20 | 4 | .. | 24 | .. | 20 | 4 | .. | 24 | .. | 456 | .. | .. | 456 | 480 |
| 1 | 4 | .. | .. | 5 | 1 | 4 | .. | .. | 5 | 4 | 50 | .. | .. | 54 | 59 |
| .. | 16 | 22 | .. | 38 | .. | 16 | 22 | .. | 38 | .. | 540 | .. | .. | 540 | 578 |
| .. | 190 | 2 | .. | 192 | 3 | 190 | 2 | .. | 195 | .. | 134 | .. | .. | 134 | 329 |
| .. | 111 | .. | .. | 111 | 1 | 112 | 1 | .. | 114 | 5 | 58 | .. | .. | 63 | 177 |
| .. | 154 | .. | .. | 154 | .. | 154 | 4 | .. | 158 | .. | 367 | .. | .. | 367 | 525 |
| .. | 91 | .. | .. | 91 | .. | 91 | 1 | .. | 92 | .. | 63 | .. | .. | 63 | 155 |
| .. | .. | 3 | .. | 3 | .. | .. | 3 | .. | 3 | .. | 97 | 3 | .. | 100 | 103 |
| 1 | 717 | 32 | .. | 750 | 5 | 718 | 38 | .. | 761 | 9 | 2,223 | 3 | .. | 2,235 | 2,996 |
| *stract.* | | | | | | | | | | | | | | | |
| .. | 131 | 1 | .. | 132 | 1 | 131 | 1 | .. | 133 | 12 | 606 | .. | .. | 618 | 751 |
| 5 | 21 | 4 | .. | 30 | 6 | 21 | 4 | .. | 31 | 1 | 638 | .. | .. | 639 | 670 |
| 6 | 12 | .. | .. | 18 | 6 | 12 | .. | .. | 18 | 4 | 147 | .. | .. | 151 | 169 |
| .. | 16 | 22 | .. | 38 | .. | 16 | 22 | .. | 38 | 2 | 689 | 1 | .. | 692 | 730 |
| .. | 190 | 2 | .. | 192 | 5 | 190 | 2 | .. | 197 | .. | 220 | .. | .. | 220 | 417 |
| .. | 111 | .. | .. | 111 | 2 | 113 | 1 | .. | 116 | 5 | 393 | .. | .. | 398 | 514 |
| .. | 154 | .. | .. | 154 | 2 | 154 | 4 | .. | 160 | 8 | 387 | .. | .. | 395 | 555 |
| .. | 91 | .. | .. | 91 | 2 | 91 | 1 | .. | 94 | 1 | 645 | .. | .. | 646 | 740 |
| .. | 38 | 3 | .. | 41 | 1 | 100 | 3 | .. | 104 | 5 | 1,045 | 3 | .. | 1,053 | 1,157 |
| 11 | 764 | 32 | .. | 807 | 25 | 828 | 38 | .. | 891 | 38 | 4,770 | 4 | .. | 4,812 | 5,703 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | 2 | .. | .. | 2 | 4 | 2 | .. | .. | 6 | 57 | 584 | .. | .. | 641 | 647 |
| .. | .. | .. | .. | .. | 17 | 7 | .. | .. | 24 | 101 | 4 | .. | .. | 105 | 129 |
| .. | .. | .. | .. | .. | 124 | 19 | .. | .. | 143 | .. | .. | .. | .. | .. | 143 |
| .. | .. | .. | .. | .. | 16 | 14 | .. | .. | 30 | .. | .. | .. | .. | .. | 30 |
| .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 394 | 20 | .. | .. | 414 | 415 |
| 4 | .. | .. | .. | 4 | 5 | .. | .. | .. | 5 | 49 | .. | .. | .. | 49 | 54 |
| 4 | .. | .. | .. | 4 | 6 | .. | .. | .. | 6 | .. | 542 | .. | .. | 542 | 548 |
| .. | 12 | .. | .. | 12 | 4 | 17 | .. | .. | 21 | 26 | 789 | .. | .. | 815 | 836 |
| .. | 15 | .. | .. | 15 | 2 | 17 | .. | .. | 19 | .. | 487 | .. | .. | 487 | 506 |
| 8 | 29 | .. | .. | 37 | 178 | 77 | .. | .. | 255 | 627 | 2,426 | .. | .. | 3,053 | 3,308 |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 169 | .. | .. | 4 | 173 | 34 | 16 | .. | .. | 50 | 223 |
| .. | .. | .. | .. | .. | 28 | .. | .. | .. | 28 | .. | .. | .. | .. | .. | 28 |
| 6 | .. | .. | .. | 6 | 7 | .. | .. | .. | 7 | .. | .. | .. | .. | .. | 7 |
| 6 | .. | .. | .. | 6 | 204 | .. | .. | 4 | 208 | 34 | 16 | .. | .. | 50 | 258 |

Outturn (in thousands of cubic feet or thousands of cubic feet solid) of timber and fuel

| Division | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | | | | | | | | | | | | | | | WESTERN |
| | | | | | | | | | | | | | | | *III. Reserved* |
| | | | | | *(In thousands of cubic feet.)* | | | | | | | | | | *IV. Unreserved* |
| Mangalore, North .. | 1 | .. | .. | .. | 1 | .. | 363 | .. | .. | 363 | .. | .. | .. | .. | .. |
| Do. South .. | .. | 112 | 1 | 5 | 118 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| The Nilgiris .. | .. | 25 | .. | .. | 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North .. | .. | 68 | .. | .. | 68 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Central .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | 1 | 205 | 1 | 5 | 212 | .. | 363 | .. | .. | 363 | .. | .. | .. | .. | .. |
| Grand total .. | 194 | 232 | 1 | 9 | 436 | 50 | 368 | .. | .. | 418 | 125 | 16 | .. | .. | 141 |
| Presidency total— | | | | | | | | | | | | | | | |
| *Reserved Forests* .. | 81 | 246 | 13 | .. | 340 | 67 | 81 | 29 | 1 | 178 | 147 | 30 | | .. | 177 |
| *Reserved Lands* .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| *Leased Forests* .. | 155 | .. | .. | 4 | 159 | 42 | .. | .. | .. | 42 | 1 | .. | .. | .. | 1 |
| *Unreserved Lands* .. | 4 | 783 | 19 | 9 | 815 | 4 | 488 | 6 | 54 | 552 | 7 | 19 | .. | .. | 26 |
| Grand total, Presidency. | 240 | 1,029 | 32 | 13 | 1,314 | 113 | 569 | 35 | 55 | 772 | 155 | 49 | . | .. | 204 |

REMARKS.—The figures are actuals except in the following cases:—

| | Factor of conversion. |
|---|---|
| *Mangalore, North*—Outturn under "purchasers" .. .. .. | *Timber.*—The sale amount is converted into yield, the factor of conversion being 16 cubic feet per rupee.<br>*Fuel*—The sale amount is converted into yield, the factor of conversion being 3 pies per cubic foot. |
| *Mangalore, South*—Outturn under all agencies except "Government" | One tree = 25 cubic feet. |
| *South Malabar*—Reserved forests (column 2), 8,027 cubic feet .. | One log of above 4 candies = 52 cubic feet.<br>Do. from 2 to 4 candies = 26 do..<br>Do. under 2 candies = 20 cubic feet. |
| Leased forests (column 2), 68,039 do. .. | One short log = 4 cubic feet. |
| | Measurables = 6 cubic feet. |
| Reserved forests (column 7), 3,064 do. .. | Smaller classes of saplings are calculated approximately as per standard measurements |
| Leased forests (column 7), 18,062 do. .. | |
| Do. (column 27) .. .. .. | 336 cords of fuel, 1 cord = 1·28 cubic feet. |
| Do. (column 28) .. .. .. | |

*The Nilgiris*—Timber from unreserved lands is converted on sums realized at Rs. 1-4-0 per cart-load of 20 cubic feet.
*Kollegal*—Reserved forests (column 17) .. .. .. .. 7,539 quarters of sandalwood at half a cubic foot per quarter.
*Central Coimbatore*—The sale amount is converted into yield, the factor of conversion being one anna per cubic foot.

during the year 1916-17 and agency of exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| CIRCLE—cont. | | | | | | | | | | | | | | | |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | (*In thousands of cubic feet.*) | | | | | | | | |
| .. | 193 | 2 | 14 | 209 | 1 | 556 | 2 | 4 | 573 | .. | 733 | .. | .. | 733 | 1,306 |
| .. | .. | .. | .. | .. | .. | 112 | 1 | 5 | 118 | .. | 190 | .. | .. | 190 | 308 |
| .. | .. | .. | .. | .. | .. | 25 | .. | .. | 25 | .. | 1 | .. | .. | 1 | 26 |
| .. | 10 | .. | .. | 10 | .. | 10 | .. | .. | 10 | .. | 14 | .. | .. | 14 | 24 |
| .. | .. | .. | .. | .. | .. | 68 | .. | .. | 68 | .. | 27 | .. | .. | 27 | 95 |
| .. | 80 | 1 | .. | 81 | .. | 80 | 1 | .. | 81 | .. | 73 | .. | .. | 73 | 154 |
| .. | 283 | 3 | 14 | 300 | 1 | 851 | 4 | 19 | 875 | .. | 1,038 | .. | .. | 1,038 | 1,913 |
| 14 | 312 | 3 | 14 | 343 | 383 | 928 | 4 | 23 | 1,338 | 661 | 3,480 | .. | .. | 4,141 | 5,479 |
| 24 | 265 | 13 | .. | 302 | 319 | 622 | 55 | 1 | 997 | 920 | 13,770 | 3 | 154 | 14,847 | 15,844 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31 | .. | .. | 31 | 31 |
| 6 | .. | .. | .. | 6 | 204 | .. | .. | 4 | 208 | 36 | 50 | .. | .. | 86 | 294 |
| 5 | 1,573 | 96 | 14 | 1,688 | 20 | 2,863 | 121 | 77 | 3,081 | 59 | 5,593 | 4 | 427 | 6,083 | 9,164 |
| 35 | 1,838 | 109 | 14 | 1,996 | 543 | 3,485 | 176 | 82 | 4,286 | 1,015 | 19,444 | 7 | 581 | 21,047 | 25,333 |

## Annual Form No. 77.

*Forest Department, Madras Presidency.*

Outturn of minor forest produce during the year 1916–17.

| Circle. | Description of produce. | Produce removed or utilised | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free-grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | | NO. | RS. | RS. | RS. | RS. | RS. |
| Northern Circle .. | Bamboos .. .. .. .. | 154,564 | 2,659 | 1,45,301 | 1,765 | 439 | 1,50,164 |
| | Grazing and fodder grass .. | .. | .. | 1,22,402 | 3,785 | 2,419 | 1,28,606 |
| | | MDS. | | | | | |
| | Grass (tharbi, korai, etc.). .. | 11,715 | 130 | 2,273 | 433 | .. | 2,836 |
| | Tamarind, soapnuts, galnuts, nux-vomica, sheakoy, etc. | 63 | 49 | 36,363 | .. | .. | 36,412 |
| | Horns, honey, wax, resin, gum, skins, etc. | .. | .. | 962 | .. | .. | 962 |
| | Tangedu, etc., barks and fibres. | 2,476 | 1,090 | 51,512 | .. | .. | 52,602 |
| | Stone, gravel, earth, etc. .. | 1,173 | 9 | 2,772 | 32 | .. | 2,813 |
| | Leaves for platters .. .. | .. | .. | 161 | .. | .. | 161 |
| | Date and palmyra leaves, stacks, etc. | 180 | 26 | 6 | 9 | .. | 41 |
| | Manure leaves and thorns .. | 720 | 6 | 841 | .. | .. | 847 |
| | Miscellaneous, including tree-tapping and tree-owners' fees. | 11,035 | 4,030 | 58,698 | 175 | 23,571 | 86,474 |
| | Total .. | 27,362 | 5,340 | 1,53,588 | 649 | 23,571 | 1,83,148 |
| | Grand total .. | .. | 7,999 | (a) 4,21,291 | 6,199 | 26,429 | 4,61,918 |
| | | NO. | | | | | |
| Central Circle .. | Bamboos .. .. .. .. | 5,469 | 75 | 24,312 | 77 | .. | 24,464 |
| | Grazing and fodder grass .. | .. | .. | 3,48,787 | 174 | 127 | 3,49,088 |
| | | MDS. | | | | | |
| | Grass (thatch) and korai, etc. .. | 2,980 | 25 | 2,534 | 104 | .. | 2,663 |
| | Tamarind, soapnuts and gallnuts. | 9,037 | 10,294 | 66,604 | .. | .. | 76,898 |
| | Horns, honey, wax, gum, etc. | .. | .. | 37 | .. | .. | 37 |
| | Tangedu, vembadam, etc. .. | 281 | 694 | 4,04,981 | .. | .. | 4,05,675 |
| | Mica, stone, gravel, etc. .. | .. | .. | 29,261 | .. | .. | 29,261 |
| | Manure leaves, thorns, etc. .. | ... | .. | 9,067 | .. | .. | 9,067 |
| | Date, palmyra leaves, etc. .. | 88 | 5 | 4,790 | 463 | .. | 5,258 |
| | Miscellaneous including tree-tapping and tree-owners' fees. | 726 | 1,557 | 95,416 | .. | .. | 96,973 |
| | Total .. | 13,112 | 12,575 | 6,12,690 | 567 | .. | 6,25,832 |
| | Grand Total .. | .. | 12,650 | 9,85,789 | 818 | 127 | 9,99,384 |
| | | NO. | | | | | |
| Southern Circle .. | Bamboos .. .. .. .. | 8,202 | 640 | 1,20,968 | 480 | .. | 1,22,088 |
| | | MDS. | | | | | |
| | Grazing and fodder grass .. | .. | .. | 1,68,563 | 3,311 | .. | 1,71,874 |
| | Grass (thatch, korai, etc.) .. | 456 | 7 | 5,906 | .. | 96 | 6,009 |
| | Dammer, cardamoms, etc. .. | 1 | 28 | 11,410 | .. | .. | 11,438 |
| | Tamarind, soapnuts, gallnuts, etc. | 620 | 322 | 4,393 | .. | .. | 4,715 |
| | Avaram, vembadam, etc., barks. | 361 | 682 | 21,604 | .. | .. | 22,286 |
| | Stones, gravel and earth .. | 31,320 | 54 | 10,451 | .. | .. | 10,505 |
| | Manure leaves, thorns, etc. .. | .. | .. | 21,301 | .. | .. | 21,301 |
| | Date, palmyra leaves, etc. .. | .. | .. | 3,090 | 13 | .. | 3,103 |
| | Miscellaneous, including tree-tapping fees. | 943 | 309 | 1,29,596 | .. | 955 | 1,30,860 |
| | Total .. | .. | 1,402 | 3,76,314 | 3,324 | 1,051 | 3,82,091 |
| | Grand total .. | .. | 2,042 | 4,97,282 | 3,804 | 1,051 | 5,04,179 |
| | *Reserved forests.* | NO. | | | | | |
| Western Circle .. | Bamboos in number .. .. | 25,323 | 1,324 | 39,231 | 27 | .. | 40,582 |
| | Grazing and fodder grass .. | .. | .. | 99,805 | 1,014 | .. | 1,00,819 |

NOTE.—This return shows the outturn or demand accrued during the year as per heading but Form No. 80 shows the actual collections. Form No. 77 will not therefore agree with Form No. 80.

(a) Excludes Rs. 8,398 realized in Parlakimedi Maliahs.

Outturn of minor forest produce during the year 1916-17—*cont.*

| District. | Description of produce. | Produce removed or utilized | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government Agency. | | By purchasers. | By free grantees. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | *Other produce.* | QRS. | RS. | RS. | RS. | RS. | RS. |
| | Grass (thatch, korai, etc.) .. | 398 | 90 | 261 | 43 | .. | 394 |
| | Dammer, turmeric, pepper, cardamoms, etc. | 4 | 18 | 1,757 | .. | .. | 1,775 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | 163 | 247 | 8,639 | .. | .. | 8,886 |
| | Horns, honey, wax, gum, resin, skins, etc. | 39 | 976 | 1,255 | .. | .. | 2,231 |
| | Avaram, vembadam, etc., barks and fibres. | 114 | 35 | 10,098 | .. | .. | 10,133 |
| | Stones, earth, gravel, etc. .. | .. | .. | 1,404 | 6 | .. | 1,410 |
| | Manure leaves, thorns, etc. .. | .. | .. | 842 | 49 | .. | 891 |
| | Date and palmyra leaves .. | .. | .. | 1,339 | .. | .. | 1,339 |
| | Miscellaneous .. .. .. | 190 | 256 | 9,093 | .. | .. | 9,349 |
| | | 908 | 1,622 | 34,688 | 98 | .. | 36,408 |
| | Total .. | .. | 2,946 | 1,73,724 | 1,139 | .. | 1,77,809 |
| | *Leased forests.* | | | | | | |
| | Bamboos in number .. .. | 59,539 | 3,572 | 1,752 | 9 | .. | 5,333 |
| | Grazing and fodder grass .. | .. | .. | 770 | .. | .. | 770 |
| | *Other produce.* | QRS. | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | 16 | .. | .. | 16 |
| | Horns, honey, wax, gum, resin, skins, etc. | 107 | 579 | .. | .. | .. | 579 |
| | Stones, gravel, earth, etc. .. | .. | .. | 58 | .. | .. | 58 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | .. | .. | 5 | .. | .. | 5 |
| | | 107 | 579 | 79 | .. | .. | 658 |
| | Total .. | .. | 4,151 | 2,601 | 9 | .. | 6,761 |
| Western Circle—*cont.* | *Unreserved lands.* | | | | | | |
| | Bamboos in number .. .. | .. | .. | 292 | .. | .. | 292 |
| | *Other produce.* | QRS. | | | | | |
| | Catechu .. .. .. .. | 1,200 | 11,250 | .. | .. | .. | 11,250 |
| | Grass (thatch, korai, etc.) .. | .. | .. | 151 | .. | .. | 151 |
| | Dammer, turmeric, pepper, cardamoms, etc. | .. | .. | 30 | .. | .. | 30 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoy, etc. | .. | .. | 1,731 | .. | .. | 1,731 |
| | Avaram, vembadam, etc., barks and fibres. | .. | .. | 2,615 | .. | .. | 2,615 |
| | Stones, gravel, earth, etc. .. | .. | .. | 506 | 32 | .. | 538 |
| | Manure leaves, thorns, etc. .. | .. | .. | 9 | .. | .. | 9 |
| | Date and palmyra leaves .. | .. | .. | 251 | .. | .. | 251 |
| | Miscellaneous .. .. .. | .. | .. | 17,422 | .. | .. | 17,422 |
| | | 1,200 | 11,250 | 22,715 | 32 | .. | 33,997 |
| | Total .. | .. | 11,250 | 23,007 | 32 | .. | 34,289 |
| | *Abstract for the Circle.* | | | | | | |
| | Bamboos in number .. .. | 84,862 | 4,896 | 41,275 | 36 | .. | 46,207 |
| | Grazing and fodder grass .. | .. | .. | 1,00,575 | 1,014 | .. | 1,01,589 |
| | Other produce .. .. | 2,215 | 13,451 | 57,482 | 130 | .. | 71,063 |
| | Grand total, Western Circle .. | .. | 18,347 | 1,99,332 | 1,180 | .. | 2,18,859 |
| | Total, Presidency, Bamboos .. | NO. 253,097 | 8,276 | 331,856 | 2,358 | 439 | 3,42,923 |
| | Grazing and fodder-grass .. | .. | .. | 740,327 | 8,284 | 2,546 | 7,51,157 |
| | Other produce .. .. .. | MDS. 42,689 | 32,768 | 1,031,511 | 1,359 | 24,622 | 10,90,260 |
| | Grand total, Presidency .. | .. | 41,038 | 21,03,694 | 12,001 | 27,607 | 21,84,340 |

## ANNUAL FORM No. 78.

*Forest Department, Madras Presidency*

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1916–17.

| District. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **TIMBER (CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | (a) 55,977 | (b) 15,068 | (c) 71,045 | (d) 66,680 | (e) 4,365 |
| Vizagapatam | 1,628 | 4,551 | 6,179 | 2,028 | 4,151 |
| Gôdâvari, Upper | 11,996 | 2,677 | 14,673 | 1,285 | 13,388 |
| Do. Lower | 21,615 | 6,437 | 28,052 | 17,115 | 10,937 |
| Kistna | .. | 81 | 81 | 81 | .. |
| Kurnool, East | 2,020 | 10,377 | 12,397 | 10,429 | 1,968 |
| Do. South | 2,172 | 14,308 | 16,475 | 10,196 | 6,279 |
| Do. West | 13,149 | 71,202 | 84,351 | 26,549 | 57,802 |
| Total | 108,557 | 124,696 | 233,253 | 134,363 | 98,890 |
| *Central Circle.* | | | | | |
| Bellary | 382 | 965 | 1,347 | 457 | 890 |
| Anantapur | .. | 1,614 | 1,614 | 1,611 | 3 |
| Guntûr | .. | 797 | 797 | 797 | .. |
| Cuddapah, North | 704 | 2,292 | 2,996 | 2,475 | 521 |
| Do. South | 386 | 569 | 955 | 589 | 366 |
| Do. West | 490 | 2,191 | 2,681 | 2,232 | 449 |
| Nellore | 73 | 205 | 278 | 103 | 175 |
| Chingleput | 100 | 1,327 | 1,427 | 1,082 | 345 |
| Chittoor | .. | 1,208 | 1,208 | 1,058 | 150 |
| Total | 2,135 | 11,168 | 13,303 | 10,404 | 2,899 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | 1,333 | 1,333 | 463 | 870 |
| Do. South | 1,714 | 6,080 | 7,794 | 3,996 | 3,798 |
| Do. West | 1,193 | 6,274 | 7,467 | 4,827 | 2,640 |
| Arcot, South | 149 | 24 | 173 | 173 | .. |
| Salem, North | 437 | 4,959 | 5,396 | 4,801 | 595 |
| Do. South | 96 (f) + 2 | 2,228 | 2,326 | 1,918 | 408 |
| Trichinopoly | 36 | 1,849 | 1,885 | 617 | 1,268 |
| Madura | 724 | 1,795 | 2,519 | 2,500 | 19 |
| Tinnevelly | 2,055 | 882 | 2,937 | 2,830 | 107 |
| Total | 6,404 (f) + 2 | 25,424 | 31,830 | 22,125 | 9,705 |
| *Western Circle.* | | | | | |
| Mangalore, North | 4,242 | 4,799 | 9,041 | 4,047<br>678 | 4,316 |
| Do. South | 3,435 | 17,130 | 20,565 | 3,915<br>490<br>190 | 15,970 |
| Malabar, North | 28,726 | 124,927 | 153,653 | 147,746<br>4,719<br>33 | 1,155 |
| Do. South | 202,225 | † 189,663 | 391,888 | 123,296<br>1,585<br>445 | 266,562 |
| The Nilgiris | 53,493 | 27,692 | 81,185 | 62,996<br>273<br>44 | 17,872 |
| Kollegal | 1,002 | 4,389 | 5,391 | 1,343<br>3,728<br>213<br>55 | 52 |
| Coimbatore, North | 2,290 | 5,580<br>‡ 3,728 | 11,598 | 4,494<br>1,145<br>676 | 5,283 |
| Do. Central | 1,577 | 4,275 | 5,852 | 3,297<br>550<br>31 | 1,974 |
| Do. South | 351,134<br>* 6,263 | 9,400 | 366,797 | 82,390<br>1,983<br>8,424 | 274,000 |
| Total | 654,387 | 391,583 | 1,045,970 | 458,786 | 587,184 |
| Grand total, Presidency | 771,485 | 552,871 | 1,324,356 | 625,678 | 698,678 |

* Excess found at the inspections of depots.
† Includes 4,230 cubic feet of timber felled departmentally and granted to right-holders free of cost.
‡ Transferred from Kollegal to North Coimbatore.
(a) Excludes 605 c.ft. belonging to the Parlakimedi Maliahs.
(b) Do. 1,863 do. do.
(c) Do. 2,468 do. do.
(d) Do. 1,389 do. do.
(e) Do. 1,129 do. do.
(f) Omitted to be shown as balance in the previous year's return.

Account of timber fuel, bamboos and minor produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1916-17—*cont.*

| Name of districts. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depôts. |
|---|---|---|---|---|---|
| **FUEL (CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | (*a*) 18,630 | (*b*) 9,758 | (*c*) 28,388 | (*d*) 23,560 | 4,828 |
| Vizagapatam | .. | 220 | 220 | 220 | .. |
| Godavari, Upper | 985 | 8,331 | 9,316 | 6,495 | 2,821 |
| Do. Lower | .. | 38,895 | 38,895 | 31,969 | 6,926 |
| Kistna | .. | 216 | 216 | 216 | .. |
| Kurnool, East | 22,480 | 6,981 | 29,461 | 24,316 | 5,145 |
| Do. South | 80 | .. | 80 | 80 | .. |
| Do. West | 158,442 | 196,065 | 354,507 | 205,689 | 148,818 |
| Total .. | 200,617 | 260,466 | 461,083 | 292,545 | 168,538 |
| *Central Circle.* | | | | | |
| Bellary | 1,080 | 7,342 | 8,422 | 5,162 | 3,260 |
| Anantapur | .. | 398 | 398 | 398 | .. |
| Guntur | .. | 420 | 420 | 420 | .. |
| Cuddapah, North | (*e*) 1,250 | 2,797 | 4,047 | 4,045 | 2 |
| Do. South | (*e*) 1,450 | 20,700 | 22,150 | 22,150 | .. |
| Do. West | 4,600 | 12,188 | 16,788 | 16,788 | .. |
| Nellore | 1,670 | 824 | 2,494 | 2,201 | 293 |
| Chingleput | .. | 1,162 | 1,162 | 787 | 375 |
| Chittoor | 432 | 9,838 | 10,270 | 10,270 | .. |
| Total .. | (*e*) 10,482 | 55,669 | 66,151 | 62,221 | 3,930 |
| *Southern Circle.* | | | | | |
| Vellore, North | 6 | 11,595 | 11,601 | 11,596 | 5 |
| Do. South | 340 | 1,492 | 1,832 | 1,532 | 300 |
| Do. West | .. | 3,790 | 3,790 | 3,790 | .. |
| Arcot, South | 6 | 1,688 | 1,694 | 1,614 | 80 |
| Salem, North | 1,012 | .. | 1,012 | 1,012 | .. |
| Do. South | .. | 4,760 | 4,760 | 4,740 | 20 |
| Trichinopoly | 1,236 | 7,808 | 9,044 | 9,000 | 44 |
| Madura | 4,500 | 1,400 | 5,900 | 5,870 | 30 |
| Tinnevelly | 736 | 5,000 | 5,736 | 5,490 | 246 |
| Total .. | 7,836 | 37,533 | 45,369 | 44,644 | 725 |
| *Western Circle.* | | | | | |
| Mangalore, North | 23,544 | 56,645 | 80,189 | 18,710<br>432 | 61,047 |
| Do. South | 37,476 | 100,570 | 138,046 | 42,010<br>640<br>976 | 94,420 |
| Malabar, North | .. | 325 | 325 | 325 | .. |
| Do. South | 3,228 | 34,378 | 37,606 | 30,359<br>48 | 7,199 |
| The Nilgiris | 226,706 | 394,131 | 620,837 | 478,881<br>2,528<br>1,077 | 138,351 |
| Kollegal | 130,100 | 49,400 | 179,500 | 179,500 | .. |
| Coimbatore, Central | 3,175 | 25,606 | 28,781 | 19,081<br>540 | 9,160 |
| Total .. | 424,329 | 661,055 | 1,085,284 | 775,107 | 310,177 |
| Grand total, Presidency .. | 643,164 | 1,014,723 | 1,657,887 | 1,174,517 | 483,370 |

(*a*) Excludes 8,540 c.ft. of fuel belonging to Parlakimedi Maliahs.
(*b*) Do. 34,260 do. do.
(*c*) Do. 42,800 do. do.
(*d*) Do. 42,800 do. do.
(*e*) The increase of 2,000 cubic feet in the opening balance is due to that quantity having been wrongly shown under disposal in the last year's return.

Account of timber fuel, bamboos and minor produce cut or collected by Government Agency and brought to depôt, sold locally or otherwise disposed of during 1916-17—*cont.*

| Name of district. | Balance at commencement of the year in forest and sale depôts. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depôts |
|---|---|---|---|---|---|
| **BAMBOOS (NUMBER).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | 1,000 | 7,065 | 8,065 | 7,665 | 400 |
| Vizagapatam | .. | 3,800 | 3,800 | 3,800 | .. |
| Godâvari, Upper | 1,069 | 5,448 | 6,517 | 5,767 | 750 |
| Do. Lower | 3,607 | 24,518 | 28,125 | 27,228 | 897 |
| Kistna | .. | .. | .. | .. | .. |
| Kurnool, East | 11,946 | 96,153 | 108,099 | 93,922 | 14,177 |
| Do. South | .. | 1,800 | 1,800 | 1,800 | .. |
| Do. West | .. | 15,780 | 15,780 | 15,780 | .. |
| Total .. | 17,622 | 154,564 | 172,186 | 155,962 | 16,224 |
| *Central Circle.* | | | | | |
| Bellary | .. | 390 | 390 | 290 | 100 |
| Anantapur | .. | 6 | 6 | 6 | .. |
| Guntûr | .. | .. | .. | .. | .. |
| Cuddapah, North | 420 | 3,220 | 3,640 | 870 | 2,770 |
| Do South | .. | 1,508 | 1,508 | 1,448 | 60 |
| Do. West | .. | 300 | 300 | 300 | .. |
| Nellore | .. | .. | .. | .. | .. |
| Chingleput | 9 | 45 | 54 | 24 | 30 |
| Chittoor | .. | .. | .. | .. | .. |
| Total .. | 429 | 5,469 | 5,898 | 2,938 | 2,960 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | 1,404 | 1,404 | 1,404 | .. |
| Do. South | .. | 1,600 | 1,600 | 1,600 | .. |
| Do. West | .. | .. | .. | .. | .. |
| Arcot, South | 2 | 530 | 532 | 532 | .. |
| Salem, North | 600 | 417 | 1,017 | 967 | 50 |
| Do. South | 221 | .. | 221 | 221 | .. |
| Trichinopoly | .. | .. | .. | .. | .. |
| Madura | .. | .. | .. | .. | .. |
| Tinnevelly | .. | 4,251 | 4,251 | 4,251 | .. |
| Total .. | 823 | 8,202 | 9,025 | 8,975 | 50 |
| *Western Circle.* | | | | | |
| Mangalore North | 172 | 3,000 | 3,172 | 3,172 | .. |
| Do. South | 150 | 650 | 800 | 360<br>200 | 240 |
| Malabar, North | .. | 1,902 | 1,902 | 510 | 1,392 |
| Do. South | 51,273 | 73,868 | 125,141 | 59,907<br>1,576<br>1,101 | 62,557 |
| Kollegal | 1296 | 1,300 | 1,596 | 396<br>1,200 | .. |
| Coimbatore, North | 30 | 2,102 | 2,132 | 100<br>2,032 | .. |
| Do. Central | .. | 1,640 | 1,640 | 1,180 | 460 |
| Do. South | .. | 400 | 400 | 250<br>150 | .. |
| Total .. | 51,921 | 84,862 | 136,783 | 72,134 | 64,649 |
| Grand total, Presidency .. | 70,795 | 253,097 | 323,892 | 240,009 | 83,883 |

## Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1916–17—*cont.*

| Name of district. | Balance at commencement of the year in forest and sale depots. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depots. |
|---|---|---|---|---|---|
| **MINOR PRODUCE (MAUNDS OF 28 LB.).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | (*d*) * 82 | 1,355 | (*d*) 1,437 | 266 | (*d*) 1,171 |
| Vizagapatam | 12 | 56 | 68 | 68 | .. |
| Godavari, Upper | 36,725 | 6,872 | 43,597 | 4,314 | 39,283 |
| Do. Lower | .. | 1,723 | 1,723 | 474 | 1,249 |
| Kistna | 174 | 190 | 364 | 312 | 52 |
| Kurnool, East | 998 | 6,507 | 7,505 | 4,075 | 3,430 |
| Do. South | .. | 2,680 | 2,680 | 2,680 | .. |
| Do. West | 9,348 | 7,979 | 17,327 | 16,227 | 1,100 |
| Total .. | 47,339 | 27,362 | 74,701 | 28,416 | 46,285 |
| *Central Circle.* | | | | | |
| Bellary | .. | .. | .. | .. | .. |
| Anantapur | 2 | .. | 2 | 2 | .. |
| Guntur | .. | .. | .. | .. | .. |
| Cuddapah, North | 484 | .. | 484 | 317 | 167 |
| Do. South | 160 | 1,320 | 1,480 | 880 | 600 |
| Do. West | .. | .. | .. | .. | .. |
| Nellore | 2,247 | 11,744 | 13,991 | 8,944 | 5,047 |
| Chingleput | .. | 48 | 48 | 12 | 36 |
| Chittoor | .. | .. | .. | .. | .. |
| Total .. | 2,893 | 13,112 | 16,005 | 10,155 | 5,850 |
| *Southern Circle.* | | | | | |
| Vellore, North | 61 | 137 | 198 | 68 | 130 |
| Do. South | 50 | 379 | 429 | 92 | 337 |
| Do. West | 16 | 205 | 221 | 57 | 164 |
| Arcot, South | 60 | 797 | 857 | 802 | 55 |
| Salem, North | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. |
| Trichinopoly | .. | 208 | 208 | 200 | 8 |
| Madura | .. | 39 | 39 | 39 | .. |
| Tinnevelly | 326 | 31,936 | 32,262 | 32,257 | 5 |
| Total .. | 513 | 33,701 | 34,214 | 33,515 | 699 |
| *Western Circle.* | | | | | |
| Mangalore, North | 32 | 1,301 | 1,333 | 76; (*a*) 25 | 1,232 |
| Do. South | 8 | 10 | 18 | (*a*) 4 | 14 |
| Malabar, North | .. | 386 | 386 | 68; (*a*) 318 | .. |
| Do. South | (*c*) | 1 | 1 | .. | 1 |
| The Nilgiris | 40 | 297 | 337 | 228; (*a*) 7 | 102 |
| Kollegal | 447 | 80 | 527 | 526; (*b*) 1 | .. |
| Coimbatore, North | 71 | 80 | 151 | 151 | .. |
| Do. Central | 42 | 13 | 55 | 47 | 8 |
| Do. South | 254 | 47 | 301 | 290 | 11 |
| Total .. | 894 | 2,215 | 3,109 | 1,741 | 1,368 |
| Grand total, Presidency .. | 639 | 76,390 | 128,029 | 73,827 | 54,202 |

* Revised figure furnished by the District Forest Officer.

(*a*) Used departmentally.
(*b*) Written off the accounts.
(*c*) Two hundred and eighty-seven coconuts and four ivory pieces. The coconuts together with 358 more collected, were disposed of during the year and the weight of the ivory pieces is included in the quantity shown in column 6.
(*d*) Excludes 47 quarters of minor produce belonging to Parlakimedi Maliahs.

## ANNUAL FORM No. 79.

*Forest Department, Madras Presidency.*

Statement showing the value of timber and other produce at sale depots for the year 1916-17.

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Northern Circle.* | | | Rs. | | | Rs. | Rs. | Rs. |
| Ganjām .. | Timber .. .. | .. | (*b*) 8,813 | (*c*) 5,758 | .. | (*d*) 2,602 | (*e*) 1,586 | (*f*) .. | 4,172 |
| | Fuel .. .. | .. | (*g*) 489 | (*h*) 12 | .. | .. | .. | .. | (*i*) 12 |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | Mds. (*j*) 82 | .. | (*k*) 1,149 | Mds. (*j*) 1,171 | .. | (*k*) 600 | .. | 549 |
| Vizagapatam. | Timber .. .. | .. | 1,628 | 1,049 | .. | 4,151 | 1,540 | 491 | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | Mds. 12 | .. | 5 | .. | .. | .. | .. | 5 |
| Gōdāvari, Upper. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gōdāvari, Lower. | Timber .. .. | .. | 21,615 | 10,875 | .. | 9,189 | 4,848 | .. | 6,027 |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | 3,607 | .. | 67 | .. | .. | .. | .. | 67 |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kistna .. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, South. | Timber .. .. | .. | 2,172 | 827 | .. | 6,279 | 4,215 | 3,388 | .. |
| | Fuel .. .. | .. | 80 | 3 | .. | .. | .. | .. | 3 |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, West. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | 1,454 | 242 | .. | 2,176 | 408 | 166 | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | .. (*a*) | .. | .. | .. | .. | .. | .. | .. |
| | *Central Circle.* | | | | | | | | |
| Nellore .. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | . | .. | .. | .. | .. |
| | Bamboos .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | Mds. 2,213 | .. | 1,049 | Mds. 3,846 | .. | 3,745 | 2,696 | .. |
| | *Southern Circle.* | | | | | | | | |
| Vellore, North. | Timber .. .. | .. | .. | .. | .. | 570 | 109 | 109 | .. |
| | Fuel .. .. | .. | 6 | 3 | .. | 5 | .. | .. | 3 |
| | Minor produce .. | Mds. 61 | .. | 78 | Mds. 130 | .. | 65 | .. | 13 |
| Vellore, South. | Timber .. .. | .. | 1,708 | 36,092 | .. | 2,723 | 95,769 | 59,677 | .. |
| Vellore, West. | Timber .. | .. | 610 | 12,146 | .. | 1,717 | 60,095 | 47,949 | .. |
| Arcot, South. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North. | Timber .. .. | .. | 437 | 2,015 | .. | 595 | 4,100 | 2,085 | .. |
| | Fuel .. .. | .. | 1,012 | 11 | .. | .. | .. | .. | 11 |
| | Bamboos .. | 600 | .. | 30 | 50 | .. | 3 | .. | 27 |
| Salem, South. | Timber .. .. | .. | 96 (*a*) + 2 | 319 (*a*) + 21 | .. | 408 | 2,516 | 2,176 | .. |
| | Fuel .. .. | .. | .. | .. | .. | 20 | 1 | 1 | .. |
| | Bamboos .. | 221 | .. | 5 | .. | .. | .. | .. | 5 |
| Trichinopoly. | Timber .. .. | .. | 36 | 17 | .. | 1,268 | 6,652 | 6,635 | .. |
| | Fuel .. .. | .. | 1,236 | 30 | .. | 44 | 5 | .. | 25 |

(*a*) The District Forest Officer reports that minor forest produce shown as stock on hand at close of the year in sale depots in the return for 1915-16 was omitted from this return as the minor forest produce depots where this produce is stored are not sale depots.

(*b*) Excludes 605 cubic feet belonging to Parlākimedi Maliahs.

(*c*) Do. Rs. 500 being value of 605 cubic feet belonging to Parlākimedi Maliahs.

(*d*) Do. 1,129 cubic feet belonging to Parlākimedi Maliahs.

(*e*) Do. Rs. 600 being value of 1,129 cubic feet in Parlākimedi Maliahs.

(*f*) Do. Rs. 100 in favour of the year in Parlākimedi Maliahs.

(*g*) Do. 8,540 cubic feet belonging to Parlākimedi Maliahs.

(*h*) Do. Rs. 250 being value of 8,540 cubic feet belonging to Parlākimedi Maliahs.

(*i*) Do. Rs. 250 against the year in Parlākimedi Maliahs.

(*j*) Do. 47 quarters belonging to Parlākimedi Maliahs.

(*k*) Do. Rs. 900 being value of 47 quarters of minor produce belonging to Parlākimedi Maliahs.

Statement showing the value of timber and other produce at sale depots for 1916-17—*cont.*

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Southern Circle*—cont. | | | RS. | | | RS. | RS. | RS. |
| Madura .. | Timber .. .. | .. | 724 | 215 | .. | 19 | 6 | .. | 209 |
| | Fuel .. .. | .. | 4,500 | 281 | .. | 30 | 2 | .. | 279 |
| Tinnevelly .. | Timber .. .. | .. | 2,055 | 807 | .. | 107 | 80 | .. | 727 |
| | Fuel .. .. | .. | 736 | 15 | .. | 246 | 18 | 3 | .. |
| | Minor produce .. | MDS. 326 | .. | 29 | MDS. 5 | .. | 40 | 11 | .. |
| | *Western Circle.* | | | | | | | | |
| North Mangalore. | Timber .. .. | .. | 2,722 | 2,351 | .. | 3,486 | 2,269 | .. | 82 |
| | Bamboos .. | 172 | .. | 19 | .. | .. | .. | .. | 19 |
| North Malabar. | Timber .. .. | .. | 232 | 116 | .. | .. | .. | .. | 116 |
| South Malabar. | Timber .. .. | .. | 335 | 26 | .. | 365 | 96 | 70 | .. |
| | Fuel .. .. | .. | 22 | 5 | .. | .. | .. | .. | 5 |
| | Bamboos. .. | 9,808 | .. | 495 | .. | .. | .. | .. | 495 |
| | Minor produce .. | (*b*) .. | .. | 9 | .. | .. | .. | .. | 9 |
| The Nilgiris. | Timber .. .. | .. | 53,493 | 23,215 | .. | 17,872 | 8,885 | .. | 14,330 |
| | Fuel .. .. | .. | 36,207 | 3,077 | .. | 25,303 | 2,596 | .. | 481 |
| | Minor produce .. | QRS. 40 | .. | 240 | QRS. 102 | .. | 609 | 369 | .. |
| Kollegal .. | Timber .. .. | .. | 900 | 225 | .. | .. | .. | .. | 225 |
| | Bamboos .. .. | 56 | .. | 1 | .. | .. | .. | .. | 1 |
| | Minor produce .. | QRS. 370 | .. | 740 | .. | .. | .. | .. | 740 |
| North Coimbatore. | Timber .. .. | .. | 471 | 3,010 | .. | 5,283 | 1,21,449 | 1,18,439 | .. |
| | Minor produce .. | QRS. 71 | .. | 500 | .. | .. | .. | .. | 500 |
| South Coimbatore. | Timber .. .. | .. | 28,402 | 33,544 | .. | 19,335 | 16,491 | .. | 17,053 |
| | Minor produce .. | QRS. 251 | .. | 574 | QRS. 11 | .. | 24 | .. | 550 |
| | | | | ABSTRACT. | | | | | |
| Northern Circle. | Timber .. .. | .. | 34,228 | 18,509 | .. | 22,221 | 12,189 | .. | 6,320 |
| | Fuel .. .. | .. | 2,014 | 257 | .. | 2,176 | 408 | 151 | .. |
| | Bamboos .. | 3,607 | .. | 67 | .. | .. | .. | .. | 67 |
| | Minor produce .. | MDS. 94 | .. | 1,154 | MDS. 1,171 | .. | 600 | .. | 554 |
| | Total value .. | .. | .. | 19,987 | .. | .. | 13,197 | .. | 6,790 |
| | *Central Circle.* | | | | | | | | |
| Central Circle. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | MDS. 2,213 | .. | 1,049 | MDS. 3,846 | .. | 3,745 | 2,696 | .. |
| Southern Circle. | Timber .. .. | .. | 5,666 (*a*) + 2 | 51,611 (*a*) + 21 | .. | 7,707 | 1,69,327 | 1,17,695 | .. |
| | Fuel .. .. | .. | 7,490 | 340 | .. | 345 | 26 | .. | 314 |
| | Bamboos .. | 881 | .. | 35 | 50 | .. | 3 | .. | 32 |
| | Minor produce .. | MDS. 387 | .. | 107 | MDS. 135 | .. | 105 | .. | 2 |
| | Total value .. | .. | .. | 52,093 (*a*) + 21 | .. | .. | 1,69,461 | 1,17,347 | .. |
| Western Circle | Timber .. | .. | 86,555 | 62,487 | .. | 46,341 | 1,49,190 | 86,703 | .. |
| | Fuel .. | .. | 36,229 | 3,082 | .. | 25,303 | 2,596 | .. | 486 |
| | Bamboos .. | 10,036 | .. | 515 | .. | .. | .. | .. | 515 |
| | Minor produce .. | QRS. 732 | .. | 2,063 | QRS. 113 | .. | 633 | .. | 1,430 |
| | Total value .. | .. | .. | 68,147 | .. | .. | 1,52,419 | 84,272 | .. |
| | Grand total, Presidency. | .. | .. | 1 41,297 | .. | .. | 3,38,822 | 1,97,525 | .. |

(*a*) Omitted to be shown in the previous year's return.
(*b*) Two hundred and eighty-seven cocoanuts.

ANNUAL

*Forest Department,*

Summary of revenue of the different district

| Head of account. | Northern Circle | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Ganjam. | Vizagapatam. | Golngonda, Hill Madgole. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool, West. |
| *Receipts.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber, etc., removed by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | 8,572 | 601 | .. | 32 | 468 | .. | 7,145 | 5,867 | 13,215 |
| (*b*) Firewood and charcoal .. | 16 | 385 | 13 | .. | 175 | 3,469 | 6 | 582 | 13 | 4,359 |
| (*c*) Bamboos .. .. .. | .. | 4 | 2 | .. | .. | .. | .. | 1,959 | 3 | 2 |
| (*d*) Sandalwood .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce. | .. | 1,255 | 16 | .. | 94 | 52 | 442 | 2,253 | .. | 4,326 |
| II. Timber, etc., removed by consumers or purchasers— | | | | | | | | | | |
| (*a*) Timber .. .. .. | 30 | 8,381 | 2,223 | 3,005 | 2,509 | 37,916 | 6,619 | 1,891 | 5,202 | — 256 |
| (*b*) Firewood and charcoal .. | 2 | 9,032 | 5,211 | .. | 1,124 | 68,012 | 1,12,723 | 227 | 19,260 | 14,814 |
| (*c*) Bamboos .. .. .. | .. | 1,608 | 10,362 | .. | 16,565 | 67,345 | 5,915 | 3,961 | 33,229 | 8,245 |
| (*d*) Grazing and fodder grass.. | .. | 10,036 | 4,913 | .. | 9,674 | 15,243 | 12,307 | 33,435 | 9,079 | 27,715 |
| (*e*) Other minor produce .. | 68 | 4,299 | 23,171 | .. | 587 | 46,250 | 12,762 | 5,353 | 12,010 | 23,876 |
| (*f*) Rents for trees tapped .. | .. | 1,509 | 894 | .. | .. | 5,997 | 11,004 | 1,280 | 2,363 | 11,902 |
| (*g*) Other items .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*h*) Commutation fees .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| III. Confiscated forest produce, drift and waif-wood. | .. | 291 | 105 | .. | 509 | 3,992 | 74 | 138 | 373 | 557 |
| IV. Forests not managed by Government— | | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | | |
| (*a*) Fines and forfeitures .. | .. | 4,812 | 2,193 | 14 | 390 | 8,004 | 3,790 | 5,847 | 6,129 | 4,013 |
| (*b*) Other sources .. .. .. | 636 | 1,059 | 382 | .. | 326 | 7,225 | 1,293 | 730 | 927 | 5,195 |
| Total, Revenue .. | 752 | (*a*)51,243 | 49,586 | 3,019 | 31,985 | 2,63,973 | 1,66,935 | 64,801 | 94,455 | 1,17,963 |

| Budget heads. | Southern Circle. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | * Direction. | Forest Engineer. | Vellore, North. | Vellore, South and West. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. | Tinnevelly. |
| *Receipts.* | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. .. | 240 | .. | 70 | 1 | 51 | 3,095 | 12 | 8 | 427 | 232 |
| (*b*) Firewood and charcoal .. | .. | .. | 347 | 68 | 76 | 40 | .. | 365 | 92 | 779 |
| (*c*) Bamboos .. .. .. | .. | .. | .. | .. | 10 | 203 | 2 | .. | .. | 323 |
| (*d*) Sandalwood .. .. | 3,58,380 | .. | .. | 10,589 | 1 | .. | 33 | 64 | .. | 10 |
| (*e*) Grass and other minor produce. | .. | .. | 5 | 25 | 31 | .. | .. | 5 | 226 | 695 |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | .. | 16,822 | 3,034 | 4,154 | 11,813 | 7,122 | 9,644 | 5,762 | 3,121 |
| (*b*) Firewood and charcoal .. | .. | .. | 44,248 | 47,235 | 89,085 | 15,329 | 13,180 | 41,272 | 27,920 | 1,03,845 |
| (*c*) Bamboos .. .. .. | .. | .. | 12,486 | 36,754 | 724 | 18,998 | 22,849 | 5,366 | 2,331 | 1,304 |
| (*d*) Grazing and fodder grass .. | .. | .. | 21,280 | 30,638 | 21,777 | 29,487 | 17,011 | 21,368 | 21,337 | 5,665 |
| (*e*) Other produce .. .. | 518 | .. | 30,702 | 17,091 | 26,292 | 41,853 | 26,996 | 16,448 | 32,445 | 22,790 |
| (*f*) Rents for trees tapped .. | .. | .. | 6,976 | 2,068 | 3,608 | 1,836 | 217 | 58 | .. | .. |
| (*g*) Other items .. .. | .. | .. | .. | .. | 38 | 1,814 | .. | .. | .. | .. |
| (*h*) Commutation fees .. .. | .. | .. | .. | .. | .. | .. | 808 | .. | .. | .. |
| III. Confiscated drift and waif-wood .. | .. | .. | 79 | 151 | 299 | 442 | 298 | 184 | 702 | 154 |
| IV. Revenue from forest not managed by Government— | | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | | |
| (*a*) Fines and forfeitures .. | .. | .. | 11,041 | 11,891 | 12,130 | 7,955 | 7,891 | 6,610 | 5,462 | 4,482 |
| (*b*) Other sources .. .. .. | 27 | .. | 895 | 806 | 860 | 1,921 | 5,062 | 963 | 1,298 | 1,964 |
| Total, Receipts .. | 3,59,165 | .. | 1,44,451 | 1,60,251 | 1,59,136 | 1,34,791 | 1,02,481 | 1,02,355 | 98,002 | 1,45,364 |

(*a*) Excludes Rs. 23,988 realized in Parlakimedi Maliahs.

* *Direction* I (*a*) Rs. 240, Tinnevelly; I (*d*) Rs. 3,58,380 (Vellore, South and West, Rs. 2,36,165; Vellore, North, Rs. 2,106; Salem, North, Rs. 57,961; Salem, South, Rs. 49,708; Trichinopoly, Rs. 12,440). II (*e*) Vellore, North, Rs. 518 V (*b*) Rs. 27 (Vellore, North, Rs. 10; Vellore, South, Rs. 10; Trichinopoly, Re. 1; Madura, Rs. 3; Tinnevelly, Rs. 3).

FORM No. 80.

*Madras Presidency.*

for the Forest year 1916–17.

| Total. | Central Circle. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, North. | Cuddapah, South. | Cuddapah, West. | Nellore. | Chingleput. | Chittoor. | Total. |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 35,900 | .. | 66 | 57 | 125 | .. | 365 | 39 | 6 | .. | 13 | 671 |
| 9,018 | .. | 212 | .. | 33 | .. | 82 | 42 | 130 | 148 | 200 | 847 |
| 1,970 | .. | .. | .. | .. | .. | .. | 5 | .. | .. | .. | 5 |
| .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 10 | 11 |
| 8,438 | .. | 1 | 2 | .. | .. | .. | .. | 12,445 | .. | .. | 12,448 |
| 67,520 | .. | 11,685 | 19,568 | 9,730 | 730 | 17,685 | 5,850 | 5,138 | 4,680 | 16,191 | 91,257 |
| 2,30,405 | .. | 14,587 | 6,487 | 30,730 | 1,809 | 15,761 | 8,946 | 33,182 | 23,314 | 9,323 | 1,44,139 |
| 1,47,230 | .. | 1,152 | 270 | 4 | 3,168 | 6,679 | 1,814 | 4 | 23 | 9,211 | 22,325 |
| 1,22,402 | .. | 32,615 | 36,610 | 91,891 | 7 | 23,722 | 18,131 | 76,689 | 11,786 | 20,880 | 3,12,331 |
| 1,28,376 | .. | 81,689 | 2,56,034 | 20,123 | 2,868 | 19,169 | 34,079 | 51,382 | 11,166 | 61,634 | 5,38,144 |
| 34,449 | .. | 36,268 | 20,388 | 8,050 | 175 | 2,257 | 1,870 | 7,957 | 3,764 | 5,562 | 86,291 |
| .. | .. | .. | .. | .. | .. | 134 | .. | .. | .. | .. | 134 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6,039 | .. | 86 | 270 | 380 | 47 | 794 | 229 | 943 | 35 | 57 | 2,841 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35,192 | .. | 7,918 | 7,594 | 19,393 | 1,191 | 7,772 | 4,851 | 7,690 | 6,435 | 8,871 | 71,715 |
| 17,773 | 1 | 583 | 985 | 1,01,986 | 425 | 1,012 | 328 | 17,048 | 29,804 | 955 | 1,53,127 |
| 8,44,712 | 1 | 1,86,863 | 3,48,265 | 2,82,445 | 10,420 | 95,432 | 76,184 | 2,12,614 | 91,155 | 1,32,907 | 14.36,286 |

| Total. | Western Circle. | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | North Mangalore. | South Mangalore. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working Plans Office. | Total. |
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 4,136 | 7,860 | 1,818 | 1,398 | 62,154 | 1,56,808 | * 13,290 | 87 | 440 | 2,090 | 90,513 | .. | 3,35,958 |
| 1,767 | .. | 253 | 2,372 | .. | 253 | 45,987 | 2,442 | .. | 873 | .. | .. | 52,180 |
| 543 | .. | 256 | 21 | .. | 3,398 | .. | 20 | .. | .. | .. | .. | 3,695 |
| 3,69,077 | 1,12,011 | 402 | .. | .. | .. | 7 | .. | 6,662 | 5 | .. | .. | 1,19,087 |
| 987 | 2 | 15 | 24 | 39 | 26 | 440 | 1,163 | 357 | 84 | 1,086 | .. | 3,236 |
| 60,972 | 3,675 | 34,090 | 12,695 | 11,626 | 670 | 1,691 | 3,285 | 10,085 | 5,777 | 1,673 | .. | 85,267 |
| 3,82,114 | .. | 20,644 | 3,704 | 85 | 67 | 2,166 | 1,075 | 14,157 | 42,625 | 9,857 | .. | 94,380 |
| 1,01,812 | .. | 2,196 | 1,099 | 514 | 1,453 | 1,934 | 2,337 | 17,791 | 8,341 | 5,806 | .. | 41,471 |
| 1,68,563 | .. | 4,016 | 7,483 | 3,022 | 2 | 11,422 | 19,566 | 45,035 | 7,705 | 2,322 | .. | 1,00,573 |
| 2,15,135 | 330 | 5,466 | 8,517 | 5,846 | 1,719 | † 2,083 | 4,290 | 12,577 | 11,230 | 6,270 | .. | † 58,328 |
| 14,763 | .. | 676 | 366 | .. | .. | .. | 13 | .. | (a) 11 | .. | .. | 1,066 |
| 1,852 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 808 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 2,309 | .. | 2,933 | 504 | 120 | 325 | 10 | 37 | 176 | 403 | 129 | .. | 4,637 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 67,462 | .. | 7,517 | 4,871 | 383 | 706 | 1,225 | 1,031 | 9,626 | 6,494 | 2,300 | .. | 34,158 |
| 13,796 | 88,157 | 1,231 | 6,320 | 10,869 | ‡ 13,782 | 5,570 | 1,833 | 3,588 | 4,527 | 22,009 | 5 | 1,57,891 |
| 14,06,096 | 2,12,035 | 81,013 | 49,374 | 94,658 | 1,79,209 | 85,825 | 37,179 | 1,20,494 | 90,165 | 1,41,965 | 5 | 10,91,922 |

(a) Rs. 2 wrongly debited to II (f) instead of II (e).

The Revenue under *Direction* is distributed as follows :—

II. (a) *South Coimbatore*, Rs. 7,860 ; I (d) *Kollegal*, Rs. 88,393 ; *North Coimbatore*, Rs. 23,618 ; I (e) *The Nilgiris*, Rs. 2 ; II (a) *North Malabar*, Rs. 3,628 ; *South Coimbatore*, Rs. 47 ; II (e) *South Coimbatore*, Rs. 330 ; V (b) *South Mangalore*, Rs. 2,052 ; *North Malabar*, Rs. 5,882 ; *South Malabar*, Rs. 3,116 ; *The Nilgiris*, Rs. 7,511 ; *South Coimbatore*, Rs. 69,412 ; and *Direction*, Rs. 184.

* Includes Rs. 1,205 appertaining to *South Coimbatore*.

† Includes Rs.2 wrongly credited to this head instead of II (d).

‡ Includes Rs. 3,465 appertaining to *North Malabar*, Rs. 6,820 to *the Nilgiris* and Rs. 1,250 to *South Coimbatore*.

## Summary of expenditure of the different districts for the forest year 1916–17.

| Head of account. | Direction. | Ganjam. | Vizagapatam. | Go'gonda Hill Madgole. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool West. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Northern Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1. Refunds and drawbacks .. .. .. .. | .. | 484 | 1,458 | .. | 22,609 | 295 | 53 | 14 | 54 | 968 | 25,935 |
| *A. Conservancy and Works.* | | | | | | | | | | | |
| I. Timber, etc., removed by Government Agency— | | | | | | | | | | | |
| (a) Timber .. .. .. .. .. | .. | 2,150 | 88 | .. | 130 | 206 | 80 | 2,333 | 1,785 | 9,910 | 16,682 |
| (b) Firewood and charcoal .. .. | .. | 132 | 464 | .. | 170 | 321 | 314 | 309 | .. | 2,895 | 4,605 |
| (c) Bamboos .. .. .. | .. | 4 | .. | .. | .. | .. | .. | 1,130 | 80 | .. | 1,214 |
| (d) Sandalwood .. .. .. .. | .. | .. | .. | .. | .. | .. | | 226 | .. | .. | 226 |
| (e) Grass and other minor produce .. | .. | 708 | .. | .. | 25 | 16 | 197 | 1,979 | .. | 2,402 | 5,327 |
| II. Timber, etc., removed by consumers, etc. .. | .. | 4,645 | 4,095 | .. | 1,903 | 11,870 | 1,389 | 6,006 | 6,137 | 10,403 | 46,448 |
| III. Confiscated forest produce, drift and waif-wood. | .. | .. | .. | .. | 5 | 1,706 | 92 | 128 | 2 | 56 | 1,989 |
| IV. Forests not managed by Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests, etc. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (a) Purchase of cattle .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (b) Feed and keep of cattle .. .. .. | .. | 1,797 | 883 | .. | 1,696 | .. | .. | .. | 198 | 3,332 | 7,906 |
| (c) Stores, tools and plant .. .. .. | 317 | 1,148 | 591 | 586 | 1,204 | 5,847 | 1,060 | 838 | 73 | 1,406 | 12,570 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (a) Roads and bridges .. .. .. | .. | 3,412 | 204 | .. | 1,999 | 2,047 | 3,911 | 10,989 | 6,345 | 3,124 | 32,031 |
| (b) Buildings .. .. .. .. .. | .. | 3,474 | 1,300 | .. | 1,341 | 4,929 | 919 | 5,349 | 3,449 | 3,990 | 24,751 |
| (c) Other works .. .. .. .. | .. | 81 | 8 | .. | — 58 | 810 | .. | 1,561 | 424 | 736 | 3,562 |
| VIII. Organization, improvement and extension of forests— | | | | | | | | | | | |
| (a) Demarcation .. .. .. .. | .. | 186 | 365 | .. | 1,379 | 1,719 | 181 | 258 | 386 | 395 | 4,868 |
| (b) Cost of forests settlements, compensation for lands and rights. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (c) Surveys— | | | | | | | | | | | |
| (1) Local surveys .. .. .. | 8 | 26 | 412 | .. | 613 | 1,324 | 817 | 1,209 | 974 | 6 | 5,389 |
| (2) Surveys of India .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (d) Working plans .. .. .. | .. | 996 | .. | .. | .. | .. | .. | .. | 38 | 14 | 1,048 |
| (e) Sowing and planting .. .. .. | 360 | 85 | 3 | .. | .. | 43 | 285 | 102 | 854 | 11,528 | 13,260 |
| (f) Protection from fire .. .. .. | .. | 5,246 | 1,762 | .. | 7,873 | 4,802 | 1,493 | 11,173 | 10,117 | 11,995 | 54,461 |
| (g) Other works .. .. .. .. | .. | 83 | 10 | .. | 9 | 862 | 6,253 | 645 | 804 | 2,406 | 10,072 |
| IX. Miscellaneous— | | | | | | | | | | | |
| (a) Law charges .. .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 | 50 |
| (b) Famine batta .. .. .. .. | .. | 80 | 47 | .. | 49 | 409 | 36 | 2 | .. | — 101 | 522 |
| (c) Other charges .. .. .. .. | 1 | 561 | 14 | .. | .. | 415 | .. | 34 | .. | 2,710 | 3,735 |
| Total, A. Conservancy and Works .. | 686 | (a)24,814 | 10,246 | 586 | 18,338 | 37,325 | 16,027 | 43,771 | 31,666 | 67,257 | 2,50,716 |
| *B. Establishments.* | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (a) Conservators .. .. .. .. .. | 20,149 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,149 |
| (b) Superior officers .. .. .. .. | 6,329 | 11,900 | 3,689 | 2,992 | 12,747 | 8,400 | 5,210 | 7,219 | 7,685 | 11,491 | 77,662 |
| (c) Subordinate establishments, etc. .. .. | 1,627 | 20,102 | 8,276 | .. | 12,154 | 15,280 | 8,524 | 16,929 | 20,398 | 21,091 | 1,23,781 |
| (d) Office establishments .. .. .. | 9,675 | 8,105 | 3,799 | 429 | 5,361 | 6,719 | 3,454 | 5,292 | 5,841 | 7,617 | 56,292 |
| (e) Deputation, etc., allowances .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Grain compensation .. .. .. .. | 126 | 2,113 | 575 | 33 | 1,423 | 1,703 | 1,046 | 378 | 561 | 530 | 8,488 |
| II. Travelling allowances .. .. .. | 4,369 | 10,564 | 4,283 | 1,922 | 7,028 | 8,645 | 4,819 | 9,570 | 8,693 | 12,138 | 71,831 |
| III. Contingencies— | | | | | | | | | | | |
| (a) Contract items— | | | | | | | | | | | |
| (1) Service postage and telegram charges. | 1,005 | 1,262 | 607 | .. | 705 | 1,187 | 999 | 859 | 1,059 | 1,345 | 9,028 |
| (2) Other contract items .. .. .. | 1,145 | 1,714 | 1975 | 40 | 929 | 2,390 | 922 | 2,006 | 1,337 | 1,463 | 12,921 |
| (b) Non-Contract items— | | | | | | | | | | | |
| (1) Rents, rates and taxes .. .. .. | 134 | 101 | 34 | .. | 170 | 368 | 216 | 206 | 58 | 150 | 1,437 |
| (2) Sundries .. .. .. .. .. | 16,704 | 299 | 126 | 312 | 426 | 178 | 129 | 91 | 543 | 970 | (d)17,744 |
| Total, B. Establishments .. | (b)58,629 | 56,160 | 22,364 | 5,728 | 40,943 | 44,870 | 25,319 | 42,350 | 46,175 | 56,795 | 3,99,333 |
| Grand Total of Expenditure A and B .. | 59,315 | (c)80,974 | 32,610 | 6,314 | 59,281 | 82,195 | 41,346 | 86,121 | 77,84 | 1,24,052 | 6,50,049 |

(a) Excludes Rs. 24,098 being expenditure under "A. Conservancy and Works" incurred in the Parlakimedi Maliahs.
(b) The total figures work out to Rs. 60,663.
(c) Excludes Rs. 23,629 being expenditure under B. Establishments incurred in the Parlakimedi Maliahs.
(d) The figures totalled work out to Rs. 19,778.

## Summary of expenditure of the different districts for the Forest year 1916–17.

| Budget heads. | Directioh. | Bellary. | Anantapur. | Guntur. | Cuddapah, North. | Cuddapah, South. | Cuddapah, West. | Nellore. | Chingleput. | Chittoor. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Central Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Refunds and Drawbacks | 1 | 2,172 | 3,953 | 2,421 | 2 | 185 | 241 | 2,384 | 235 | 105 | 11,699 |
| *A. Conservancy and Works.* | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | |
| (a) Timber | .. | 14 | .. | 18 | .. | .. | .. | .. | .. | .. | 32 |
| (b) Firewood and charcoal | .. | .. | .. | .. | .. | .. | .. | 4 | 22 | 233 | 259 |
| (c) Bamboos | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (d) Sandalwood | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (e) Grass and other minor produce | .. | .. | .. | .. | .. | .. | .. | 4,260 | .. | .. | 4,260 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | 1,969 | 1,910 | 3,442 | 1,222 | 7,737 | 3,894 | 1,689 | 2,637 | 2,489 | 26,989 |
| III. Confiscated drift and waif-wood | .. | .. | 13 | .. | .. | 53 | 15 | 1 | .. | .. | 82 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | 8,000 | .. | .. | .. | .. | .. | .. | .. | .. | 8,000 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (a) Purchase of cattle | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42 | 42 |
| (b) Feed and keep of cattle | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (c) Stores, tools and plant | 887 | 193 | 108 | 274 | 14 | 148 | 353 | 844 | 122 | 172 | 3,116 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (a) Roads and bridges | * 1 | 203 | 201 | 771 | 22 | 5,434 | 2,633 | 1,266 | 1,034 | 1,650 | 13,214 |
| (b) Buildings | 53 | 1,543 | 1,828 | 1,120 | 664 | 3,039 | 3,958 | 2,176 | 715 | 2,087 | 17,183 |
| (c) Other works | .. | 5 | 41 | .. | 50 | 61 | 32 | 469 | 111 | 43 | 812 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | |
| (a) Demarcation | .. | 177 | 428 | 726 | 112 | 1,540 | 298 | 798 | 633 | 330 | 5,042 |
| (b) Cost of forest settlement; compensation for land and rights. | .. | .. | 901 | .. | .. | 549 | 13,062 | 1,539 | .. | .. | 16,051 |
| (c) Surveys — Local | 415 | 640 | 123 | 144 | .. | .. | 51 | 520 | 368 | .. | 2,513 |
| (c) Surveys — India | * 252 | | | | | | | | | | |
| (d) Working plans | .. | .. | .. | .. | .. | .. | .. | 15,125 | .. | .. | 15,125 |
| (e) Sowing and planting | .. | .. | .. | 6 | .. | .. | .. | .. | .. | .. | 6 |
| (f) Protection from fire | .. | .. | 86 | 6 | .. | 258 | .. | 257 | 4 | 850 | 1,461 |
| (g) Other works | .. | 2,050 | 4,479 | .. | 1,308 | 4,830 | 4,372 | 1,486 | 930 | 1,225 | 20,680 |
| IX. Miscellaneous— | . | 8,240 | 7,046 | 8,854 | 626 | 10,882 | 6,689 | 7,520 | 6,763 | 12,289 | 68,909 |
| (a) Law charges | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (b) Other charges | 37 | 30 | 113 | .. | .. | 238 | 652 | 5 | 5 | 47 | 1,127 |
| Grain compensation allowance | .. | .. | . | 30 | .. | 24 | 23 | 147 | 48 | .. | 272 |
| Total, A. Conservancy and Works | 1,392 / * 253 | 23,064 | 17,277 | 15,391 | 4,018 | 34,793 | 36,032 | 38,106 | 13,392 | 21,457 | 2,05,175 |
| *B. Establishments.* | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (a) Conservators | 20,400 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20,400 |
| (b) Superior officers | 7,704 / * 1,806 | 15,858 | 5,470 | 7,175 | 1,030 | 10,385 | 5,085 | 17,602 | 4,058 | 5,960 | 82,133 |
| (c) Subordinate Forest and Depot establishments. | 1,347 / * 289 | 14,532 | 14,735 | 12,872 | 3,282 | 20,924 | 12,773 | 19,307 | 7,753 | 17,395 | 1,25,209 |
| (d) Office establishments, permanent | 8,495 | 5,155 | 4,766 | 4,708 | 801 | 5,240 | 4,050 | 9,867 | 2,823 | 5,436 | 51,341 |
| Do. temporary | 50 / * 241 | 270 | 403 | 965 | 97 | 934 | 567 | 2,258 | 562 | 266 | 6,613 |
| II. Travelling allowances | 5,426 / * 1,029 | 8,128 | 6,380 | 5,959 | 1,141 | 9,372 | 5,249 | 9,998 | 4,449 | 8,092 | 65,223 |
| III. Contingencies— | | | | | | | | | | | |
| (a) Contract items— | | | | | | | | | | | |
| (1) Service postage and telegram charges. | 945 / * 20 | 755 | 1,008 | 999 | 139 | 691 | 517 | 1,332 | 483 | 894 | 7,783 |
| (2) Other contract contingencies | 2,011 / * 44 | 1,291 | 1,212 | 1,022 | 392 | 1,175 | 601 | 1,217 | 457 | 1,493 | 10,915 |
| (b) Non-contract items— | | | | | | | | | | | |
| (1) Rents, rates and taxes | .. | 321 | 99 | 41 | 15 | 88 | 122 | 32 | 352 | 61 | 1,131 |
| (2) Sundries | 10,651 | 450 | 32 | 20 | .. | 290 | 220 | 242 | 45 | 162 | 12,112 |
| Grain compensation allowance | 281 / * 1 | 2 | 408 | 1,294 | 281 | 1,679 | 1,100 | 1,818 | 780 | 1,299 | 8,943 |
| Total, B. Establishments | 57,310 / * 3,430 | 46,762 | 34,513 | 35,055 | 7,178 | 50,778 | 30,284 | 63,673 | 21,762 | 41,058 | 3,91,803 |

* Relates to Working Plans office.

## Summary of expenditure of the different districts for the Forest year 1916-17.

| Budget heads. | Direction. | Forest Engineer. | Vellore, North. | Vellore, South and West. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. | Tinnevelly. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Southern Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Refunds and Drawbacks .. .. .. .. | .. | .. | 814 | 388 | 151 | 319 | 756 | 726 | 454 | 325 | 3,933 |
| 11—Forests. | | | | | | | | | | | |
| *A. Conservancy and Works.* | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | |
| (*a*) Timber .. .. .. .. .. | .. | .. | 53 | 3 | .. | 1,077 | 8 | 154 | .. | .. | 1,295 |
| (*b*) Firewood and charcoal .. .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 27 | 29 |
| (*c*) Bamboos .. .. .. .. .. | .. | .. | .. | .. | 18 | 144 | .. | .. | .. | 162 | 324 |
| (*d*) Sandalwood .. .. .. .. | .. | .. | 148 | 11,576 | — 4 | 3,971 | 3,424 | 2,978 | .. | 38 | 22,126 |
| (*e*) Grass and other minor produce .. | 20 | .. | 17 | 249 | — 1 | .. | .. | .. | .. | 442 | 727 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | .. | 2,006 | 1,966 | 1,776 | 1,452 | 3,445 | 1,101 | 2,781 | 3,073 | 17,600 |
| III. Confiscated, drift and waif-wood .. .. | .. | .. | .. | .. | 1 | 11 | 1 | .. | 11 | .. | 24 |
| IV. Forests not managed by Government— | | | | | | | | | | | |
| (*a*) Shared and private forests .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | .. | .. | .. | .. | 84 | .. | .. | .. | .. | 84 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (*a*) Purchase of cattle .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Feed and keep of cattle .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Stores, tools and plant .. .. .. | 395 | .. | 307 | 413 | 95 | 650 | 650 | 77 | 207 | 196 | 2,990 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (*a*) Roads and bridges .. .. .. | .. | 50,789 | 4,033 | 690 | 168 | 2,529 | 1,351 | 2,210 | 5,819 | 4,835 | 72,424 |
| (*b*) Buildings .. .. .. .. .. | .. | .. | 4,581 | 7,496 | 1,208 | 4,449 | 5,176 | 3,419 | 2,597 | 2,635 | 31,561 |
| (*c*) Other works .. .. .. .. | .. | .. | 274 | 395 | 76 | 142 | 258 | 189 | 128 | — 1 | 1,461 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | |
| (*a*) Demarcation .. .. .. .. | .. | .. | 37 | 52 | 31 | 729 | 582 | .. | 3,028 | 73 | 4,532 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | 485 | 198 | .. | 44 | 597 | 362 | 347 | .. | 2,033 |
| (*c*) Surveys .. { Local .. .. .. | .. | .. | 413 | .. | 466 | 1,253 | 1,078 | 482 | .. | 397 | 4,089 |
| (*c*) Surveys .. { India .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans .. .. .. .. | .. | .. | .. | .. | 73 | 1 | 3 | .. | .. | .. | 77 |
| (*e*) Sowing and planting .. .. .. | .. | .. | 1,990 | 436 | 10 | 119 | 517 | 52 | 1,297 | 468 | 4,889 |
| (*f*) Protection from fire .. .. .. | .. | .. | 684 | 369 | 338 | 2,164 | 1,912 | 1,118 | 5,334 | 4,764 | 16,683 |
| (*g*) Other works .. .. .. .. | .. | .. | 6,923 | 8,621 | 5,675 | 5,939 | 3,759 | 3,223 | 9,554 | 5,181 | 48,885 |
| IX. Miscellaneous— | | | | | | | | | | | |
| (*a*) Law charges .. .. .. .. | .. | .. | 4 | .. | .. | .. | .. | .. | 1,945 | .. | 1,949 |
| (*b*) Other charges .. .. .. .. | 5 | .. | 250 | 38 | 82 | 253 | 182 | 218 | 101 | 210 | 1,339 |
| Grain compensation allowance .. .. | .. | .. | 83 | 21 | 51 | 4 | 4 | 23 | 62 | .. | 248 |
| Total, A. Conservancy and Works .. | 420 | 50,789 | 22,293 | 32,523 | 10,063 | 24,965 | 22,947 | 15,608 | 33,211 | 22,500 | 2,35,319 |
| *B. Establishments.* | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (*a*) Conservators .. .. .. .. | 22,800 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,800 |
| (*b*) Superior officers .. .. .. .. | 2,112 | 11,182 | 10,511 | 8,350 | 4,282 | 16,009 | 7,550 | 9,470 | 17,248 | 11,410 | 98,124 |
| (*c*) Subordinate Forest and Depot establishments. | 2,037 | 7,873 | 10,900 | 17,631 | 9,383 | 17,454 | 13,376 | 10,784 | 17,279 | 13,812 | 1,20,529 |
| (*d*) Office establishments .. .. .. | 9,636 | 4,755 | 4,194 | 6,796 | 4,478 | 6,164 | 5,803 | 5,471 | 6,107 | 5,553 | 58,957 |
| Grain compensation allowance .. .. | 186 | .. | 1,000 | 1,294 | 1,027 | 219 | 189 | 1,032 | 1,429 | 1,392 | 7,768 |
| II. Travelling allowances .. .. .. .. | 2,460 | 3,743 | 6,531 | 6,992 | 5,255 | 7,683 | 6,062 | 4,955 | 7,727 | 5,331 | 56,739 |
| III. Contingencies— | | | | | | | | | | | |
| (*a*) 1. Service postage and telegram charges. | 1,230 | .. | 932 | 1,389 | 997 | 1,404 | 525 | 1,022 | 1,262 | 837 | 9,598 |
| 2. Sundries .. .. .. .. .. | 1,044 | .. | 990 | 2,115 | 668 | 1,253 | 1,239 | 828 | 1,211 | 1,068 | 10,416 |
| (*b*) Non-contract— | | | | | | | | | | | |
| 1. Rents, rates and taxes .. .. | .. | 650 | 153 | 331 | 20 | 43 | 51 | 82 | 328 | 200 | 1,858 |
| 2. Sundries .. .. .. .. | 10,117 | 2,852 | 56 | 49 | 87 | 169 | 74 | 12 | 168 | 154 | 13,728 |
| Total, B. Establishments .. | 51,622 | 31,055 | 35,267 | 44,947 | 26,197 | 50,398 | 34,869 | 33,656 | 52,749 | 39,757 | 4,00,517 |
| Grand Total of Expenditure, A and B .. | 52,042 | 81,844 | 57,560 | 77,470 | 36,260 | 75,363 | 57,816 | 49,264 | 85,960 | 62,257 | 6,35,836 |

## Summary of expenditure of the different districts for the Forest year 1916–17.

| Budget heads. | Direction. | North Mangalore. | South Mangalore. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working plans office. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Western Circle.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| I. Refunds and Drawbacks .. | .. | 71 | 1,302 | 66 | 48 | 110 | 212 | 287 | 440 | 201 | 100 | 2,837 |
| *A. Conservancy and Works.* | | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | | |
| (*a*) Timber .. .. | .. | 1,044 | 640 | 9,518 | 11,615 | 3,390 | 76 | 157 | 374 | 15,420 | .. | 42,234 |
| (*b*) Firewood and charcoal. | .. | 1,176 | 1,649 | .. | 692 | 28,675 | 496 | .. | 638 | .. | .. | 33,326 |
| (*c*) Bamboos .. .. | .. | 121 | .. | .. | 3,282 | — 15 | 7 | 6 | 24 | .. | .. | 3,425 |
| (*d*) Sandalwood .. .. | .. | 5 | 6 | .. | .. | 127 | 3,782 | 2,502 | .. | — 1 | .. | 6,421 |
| (*e*) Grass and other minor produce. | .. | 3,070 | 13 | 68 | 246 | 188 | 175 | .. | 26 | 340 | .. | 4,126 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | 3,696 | 2,453 | 544 | 1,363 | 157 | 1,876 | 3,530 | 3,133 | 1,950 | .. | 18,702 |
| III. Confiscated, drift and waif-wood. | .. | 48 | 44 | .. | 10 | .. | .. | 1 | 4 | 2 | .. | 109 |
| V. Rent of leased forests and payment to shareholders in forests managed by Government. | .. | .. | .. | 53 | 6,253 | 4,500 | .. | .. | .. | 2,500 | .. | 13,306 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | | |
| (*a*) Purchase of cattle .. | .. | .. | 13 | 2,640 | 993 | 1,714 | .. | .. | 8 | 2,483 | .. | 7,851 |
| (*b*) Feed and keep of cattle. | .. | .. | 3,029 | 9,225 | 15,852 | 20,053 | .. | .. | .. | 17,534 | .. | 65,693 |
| (*c*) Stores, tools and plant. | 1,693 | 147 | 120 | 366 | 1,593 | 1,704 | 189 | 343 | 410 | 2,495 | 771 | 9,831 |
| VII. Communications and buildings— | | | | | | | | | | | | |
| (*a*) Roads and bridges .. | .. | 1,728 | 181 | 2,371 | 3,957 | 12,794 | 4,501 | 9,922 | 2,727 | 5,906 | .. | 44,087 |
| (*b*) Buildings .. .. | 24 | 1,742 | 3,081 | 4,584 | 3,399 | 4,243 | 2,549 | 5,270 | 2,823 | 1,178 | .. | 28,893 |
| (*c*) Other works .. .. | .. | 378 | 453 | 93 | 302 | 323 | 49 | 253 | 25 | 165 | .. | 2,041 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | | |
| (*a*) Demarcation .. .. | .. | 387 | 91 | 446 | 293 | 9,510 | 721 | 292 | 367 | 11 | .. | 12,118 |
| (*b*) Cost of Forest Settlement; compensation for land and rights. | .. | .. | .. | .. | .. | 350 | 396 | .. | 73,399 | .. | .. | 74,145 |
| (*c*) Surveys .. Local .. | .. | .. | .. | 5 | 644 | 3,047 | 590 | 12 | 747 | 1,427 | .. | 6,472 |
| (*c*) Surveys .. India .. | .. | .. | .. | .. | 2,585 | .. | .. | .. | .. | .. | .. | 2,585 |
| (*d*) Working plans .. | .. | .. | .. | .. | 897 | .. | .. | .. | .. | .. | 5,064 | 5,961 |
| (*e*) Sowing and planting.. | 510 | 32 | 41 | 1,496 | 6,758 | 1,440 | .. | 177 | 45 | 603 | .. | 11,102 |
| (*f*) Protection from fire .. | .. | 1,813 | 3,360 | 6,237 | 3,671 | 3,975 | 2,885 | 2,010 | 3,264 | 2,142 | .. | 29,357 |
| (*g*) Other works .. .. | .. | 358 | 921 | 1,625 | 1,588 | 1,427 | 2,733 | 4,857 | 6,819 | 3,562 | .. | 23,890 |
| IX. Miscellaneous— | | | | | | | | | | | | |
| (*a*) Law charges .. .. | .. | .. | 5 | .. | .. | 14 | .. | .. | .. | 761 | .. | 780 |
| (*b*) Other charges .. .. | 220 | 120 | 248 | 986 | 112 | 3,694 | 25 | 359 | 258 | 117 | .. | 6,139 |
| Grain compensation allowance. | .. | .. | .. | 36 | 137 | 147 | 22 | 24 | 19 | 133 | .. | 518 |
| Total, A. Conservancy and Works .. | 2,447 | 15,865 | 16,348 | 40,293 | 66,242 | 1,01,457 | 21,072 | 29,715 | 95,110 | 58,728 | 5,835 | 4,53,112 |
| *B. Establishments.* | | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 18,211 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 18,211 |
| (*b*) Superior officers .. .. | 6,380 | 5,515 | 5,260 | 6,056 | 13,312 | 18,804 | 3,115 | 17,500 | 6,949 | 21,501 | 4,845 | 1,09,237 |
| (*c*) Subordinate Forest and Depot establishments. | 1,843 | 7,642 | 7,874 | 13,364 | 8,537 | 19,865 | 9,309 | 13,594 | 8,669 | 10,773 | 2,607 | 1,03,977 |
| (*d*) Office establishments .. | 9,409 | 4,867 | 4,186 | 6,534 | 4,415 | 6,557 | 3,851 | 5,845 | 4,203 | 6,862 | 2,854 | 59,583 |
| (*e*) Grain compensation allowance. | 178 | 1,201 | 1,057 | 1,233 | 854 | 1,254 | 844 | 1,288 | 831 | 758 | 120 | 9,618 |
| II. Travelling allowances .. .. | 3,214 | 5,712 | 5,111 | 5,991 | 6,084 | 8,588 | 4,068 | 7,023 | 5,205 | 7,460 | 3,053 | 61,509 |
| III. Contingencies— | | | | | | | | | | | | |
| (*a*) Contract items— | | | | | | | | | | | | |
| (1) Service postage and telegram charges. | 549 | 1,071 | 893 | 660 | 545 | 976 | 359 | 806 | 508 | 1,069 | 147 | 7,583 |
| (2) Other contract contingencies. | 1,575 | 1,124 | 794 | 906 | 1,219 | 1,019 | 1,720 | 1,177 | 1,115 | 1,226 | 619 | 12,494 |
| (*b*) Non-contract items— | | | | | | | | | | | | |
| (1) Rents, rates and taxes. | 108 | 30 | .. | 27 | 57 | 793 | 621 | 37 | 100 | 163 | .. | 1,936 |
| (2) Sundries .. .. | 16,307 | 48 | 117 | 256 | 374 | 570 | 170 | 211 | 41 | 1,753 | .. | 19,847 |
| Total, B. Establishments .. | 57,774 | 27,110 | 25,292 | 35,027 | 35,397 | 58,426 | 24,057 | 47,481 | 27,621 | 51,565 | 14,245 | 4,03,995 |
| Grand Total of Expenditure A and B. | 60,221 | 42,975 | 41,640 | 75,320 | 1,01,639 | 1,59,883 | 45,129 | 77,196 | 1 22,731 | 1,10,293 | 20,080 | 8,57,107 |

Summary of receipts and expenditure during 1916-17 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements.

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1916-17. | 1915-16. |
| RECEIPTS. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. .. | 35,900 | 671 | 4,136 | 3,35,958 | 3,76,665 | 3,58,000 |
| (b) Firewood and charcoal .. | 9,018 | 847 | 1,767 | 52,180 | 63,812 | 64,388 |
| (c) Bamboos .. .. .. | 1,970 | 5 | 543 | 3,695 | 6,213 | 13,465 |
| (d) Sandalwood .. .. | .. | 11 | 3,69,077 | 1,19,087 | 4,88,175 | 2,47,256 |
| (e) Grass and other minor produce. | 8,438 | 12,448 | 987 | 3,236 | 25,109 | 37,508 |
| Total, I .. | 55,326 | 13,982 | 3,76,510 | 5,14,156 | 9,59,974 | 7,20,612 |
| II. Timber and other produce removed from the forests by consumers, etc.— | | | | | | |
| (a) Timber .. .. .. | 67,520 | 91,257 | 60,972 | 85,267 | 3,05,016 | 2,80,785 |
| (b) Firewood and charcoal .. | 2,30,405 | 1,44,139 | 3,82,114 | 94,380 | 8,51,038 | 5,92,237 |
| (c) Bamboos .. .. .. | 1,47,230 | 22,325 | 1,01,812 | 41,471 | 3,12,838 | 3,09,485 |
| (d) Grazing and fodder grass.. | 1,22,402 | 3,12,331 | 1,68,563 | 1,00,573 | 7,03,869 | 6,86,571 |
| (e) Other produce .. .. | 1,28,376 | 5,38,144 | 2,15,135 | 58,328 | 9,39,983 | 7,19,262 |
| (f) Tree-owners' fees .. .. | 34,449 | 86,291 | 14,763 | 1,066 | 1,36,569 | 1,30,156 |
| (g) Other items .. .. | .. | 134 | 1,852 | .. | 1,986 | 1,313 |
| (h) Commutation fees .. .. | .. | .. | 808 | .. | 808 | 606 |
| Total, II .. | 7,30,382 | 11,94,621 | 9,46,019 | 3,81,085 | 32,52,107 | 27,20,415 |
| III. Confiscated drift and waifwood .. | 6,039 | 2,841 | 2,309 | 4,637 | 15,826 | 19,623 |
| IV. Revenue from forests not managed by Government. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | |
| (a) Fines and forfeitures .. | 35,192 | 71,715 | 67,462 | 34,153 | 2,08,522 | 2,21,998 |
| (b) Other sources .. .. .. | 17,773 | 1,53,127 | 13,796 | 1,57,891 | 3,42,587 | 2,55,827 |
| Total, V .. | 52,965 | 2,24,842 | 81,258 | 1,92,044 | 5,51,109 | 4,77,825 |
| Grand Total, Receipts .. | 8,44,712 | 14,36,286 | 14,06,096 | 10,91,922 | 47,79,016 | 39,58,475 |
| EXPENDITURE. | | | | | | |
| 1. Refunds and drawbacks .. .. | 25,935 | 11,699 | 3,933 | 2,837 | 44,404 | 23,539 |
| *A. Conservancy and Works.* | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | |
| (a) Timber .. .. .. | 16,682 | 32 | 1,295 | 42,234 | 60,243 | 68,413 |
| (b) Firewood and charcoal .. | 4,605 | 259 | 29 | 33,326 | 38,219 | 36,222 |
| (c) Bamboos .. .. .. | 1,214 | .. | 324 | 3,425 | 4,963 | 7,807 |
| (d) Sandalwood .. .. | 226 | .. | 22,126 | 6,421 | 28,773 | 18,740 |
| (e) Grass and other minor produce. | 5,327 | 4,260 | 727 | 4,126 | 14,440 | 16,090 |
| Total, A-I .. | 28,054 | 4,551 | 24,501 | 89,532 | 1,46,638 | 1,47,272 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | 46,448 | 26,989 | 17,600 | 18,702 | 1,09,739 | 1,15,093 |
| III. Confiscated drift and waifwood .. | 1,989 | 82 | 24 | 109 | 2,204 | 2,053 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | 8,000 | 34 | 13,306 | 21,340 | 16,610 |
| VI. Live-stock stores, tools and plant— | | | | | | |
| (a) Purchase of cattle .. | .. | 42 | .. | 7,851 | 7,893 | 13,549 |
| (b) Feed and keep of cattle .. | 7,906 | .. | .. | 65,693 | 73,599 | 81,754 |
| (c) Stores, tools and plant .. | 12,570 | 3,116 | 2,990 | 9,831 | 28,507 | 28,088 |
| Total, A-VI .. | 20,476 | 3,158 | 2,990 | 83,375 | 1,09,999 | 1,23,391 |
| VII. Communications and buildings— | | | | | | |
| (a) Roads and bridges .. | 32,031 | 13,214 | 72,424 | 44,087 | 1,61,756 | 1,08,233 |
| (b) Buildings .. .. .. | 24,751 | 17,183 | 31,561 | 28,893 | 1,02,388 | 1,31,985 |
| (c) Other works .. .. | 3,562 | 812 | 1,461 | 2,041 | 7,876 | 12,279 |
| Total, A-VII .. | 60,344 | 31,209 | 1,05,446 | 75,021 | 2,72,020 | 2,52,497 |

Summary of receipts and expenditure during 1916-17 for each Circle and for the Presidency compiled in the Board's office from the Conservators' statements—*cont.*

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1916-17. | 1915-16. |
| EXPENDITURE—*cont.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| *A. Conservancy and Works*—cont. | | | | | | |
| VIII. Demarcation, etc.— | | | | | | |
| (*a*) Demarcation .. .. | 4,868 | 5,042 | 4,532 | 12,118 | 26,560 | 21,574 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | 16,051 | 2,033 | 74,145 | 92,229 | 15,987 |
| (*c*) Surveys. (1) Local .. | 5,389 | 2,513 | 4,089 | 6,472 | 18,463 | 26,436 |
| (2) India .. | .. | 15,125 | .. | 2,585 | 17,710 | .. |
| (*d*) Working-plans .. .. | 1,048 | 6 | 77 | 5,961 | 7,092 | 10,246 |
| (*e*) Sowing and planting .. | 13,260 | 1,461 | 4,889 | 11,102 | 30,712 | 41,234 |
| (*f*) Protection from fire .. | 54,461 | 20,680 | 16,683 | 29,357 | 1,21,181 | 1,26,044 |
| (*g*) Other works .. .. | 10,072 | 68,909 | 48,885 | 23,890 | 1,51,756 | 1,61,153 |
| Total, A-VIII .. | 89,098 | 1,29,787 | 81,188 | 1,65,630 | 4,65,703 | 4,02,674 |
| IX. Miscellaneous— | | | | | | |
| (*a*) Law charges .. .. | 50 | .. | 1,949 | 780 | 2,779 | 91 |
| (*b*) Grain compensation allowance. | 522 | 272 | 248 | 518 | 1,560 | .. |
| (*c*) Other charges .. .. | 3,735 | 1,127 | 1,339 | 6,139 | 12,340 | 14,285 |
| Total, A-IX .. | 4,307 | 1,399 | 3,536 | 7,437 | 16,679 | 14,376 |
| Total, A. Conservancy and Works, including Refunds and Drawbacks. | 2,76,651 | 2,16,874 | 2,39,252 | 4,55,949 | 11,88,726 | 10,97,505 |
| *B. Establishments.* | | | | | | |
| I. Salaries— | | | | | | |
| (*a*) Conservators .. .. | 20,149 | 20,400 | 22,800 | 18,211 | 81,560 | 83,073 |
| (*b*) Superior officers .. .. | 77,662 | 82,133 | 98,124 | 1,09,237 | 3,67,156 | 3,67,847 |
| (*c*) Subordinate establishments, etc. | 1,23,781 | 1,25,209 | 1,20,529 | 1,03,977 | 4,73,496 | 4,66,970 |
| (*d*) Office establishments .. | 56,292 | 57,954 | 58,957 | 59,583 | 2,32,786 | 2,20,465 |
| (*e*) Grain compensation allowance. | 8,488 | 8,943 | 7,768 | 9,618 | 34,817 | 9,579 |
| Total, B-I .. | 2,86,372 | 2,94,639 | 3,08,178 | 3,00,626 | 11,89,815 | 11,47,934 |
| II. Travelling allowances .. .. | 71,831 | 65,223 | 56,739 | 61,509 | 2,55,302 | 2,50,176 |
| III. Contingencies— | | | | | | |
| (*a*) Contract items— | | | | | | |
| (1) Service postage and telegram charges. | 9,028 | 7,783 | 9,598 | 7,583 | 33,992 | |
| (2) Other contract contingencies. | 12,921 | 10,915 | 10,416 | 12,494 | 46,746 | |
| (*b*) Non-contract items— | | | | | | 1,12,334 |
| (1) Rents, rates and taxes. | 1,437 | 1,131 | 1,858 | 1,936 | 6,362 | |
| (2) Sundries .. .. | 17,744 | 12,112 | 13,728 | 19,847 | 63,431 | |
| Total, B-III .. | 41,130 | 31,941 | 35,600 | 41,860 | 1,50,531 | 1,12,334 |
| Total, B. Establishments .. | 3,99,333 | 3,91,803 | 4,00,517 | 4,03,995 | 15,95,648 | 15,10,444 |
| Grand Total Expenditure including Refunds and Drawbacks. | 6,75,984 | 6,08,677 | 6,39,769 | 8,59,944 | 27,84,374 | 26,07,949 |
| Surplus .. .. | 1,68,728 | 8,27,609 | 7,66,327 | 2,31,978 | 19,94,642 | 13,30,526 |
| Total .. | 8,44,712 | 14,36,286 | 14,06,096 | 10,91,922 | 47,79,016 | 39,38,475 |

## ANNUAL FORM No. 81.

*Forest Department, Madras Presidency.*

Outstandings and liabilities on account of contractors and disbursers for the Forest year 1916-17.

| District. | Department debtor. | | | Department creditor. | | | Balance due. | |
|---|---|---|---|---|---|---|---|---|
| | At commencement of year. | Recoveries in cash and value of supplies and work done during the year. | At close of year. | At commencement of year. | Payments made during year. | At close of year. | To department (outstandings). | By department (liabilities). |
| *Northern Circle.* | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| Direction, Northern Circle .. | .. | 1,160 0 9 | 1,160 0 9 | 47 5 7 | 1,279 7 4 | 1,326 12 11 | 166 12 2 | .. |
| Ganjam .. .. .. | .. | 67,263 5 8 | 67,263 5 8 | 2,397 1 5 | 67,612 7 1 | 70,009 8 6 | 2,746 2 10 | .. |
| Vizagapatam .. .. | .. | 24,370 10 3 | 24,370 10 3 | 610 11 2 | 24,266 11 0 | 24,877 6 2 | 506 11 11 | .. |
| Godavari, Upper .. .. | .. | 31,122 13 4 | 31,122 13 4 | 1,366 13 1 | 30,824 9 7 | 32,191 6 8 | 1,068 9 4 | .. |
| Do. Lower .. .. | .. | 71,762 1 10 | 71,762 1 10 | 1,397 15 1 | 71,823 0 10 | 73,220 15 11 | 1,458 14 1 | .. |
| Kistna .. .. .. | .. | 33,847 6 2 | 33,847 6 2 | 544 4 11 | 34,022 8 11 | 34,566 13 10 | 719 7 8 | .. |
| Kurnool, East .. .. | .. | 89,696 12 7 | 89,696 12 7 | 2,079 0 1 | 89,741 0 11 | 91,820 1 0 | 2,123 4 5 | .. |
| Do. South .. .. | .. | 67,936 13 9 | 67,936 13 9 | 1,876 10 7 | 67,653 6 5 | 69,530 1 0 | 1,593 3 3 | .. |
| Do. West .. .. | .. | 1,35,277 14 3 | 1,35,277 14 3 | 4,327 2 1 | 1,31,893 1 9 | 1,36,220 3 10 | 942 5 7 | .. |
| Golconda Agency and Hill Madgole. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | .. | (a)5,22,437 14 7 | (a)5,22,437 14 7 | (b)14,647 0 0 | (c)5,19,116 5 10 | (d)5,33,763 5 10 | (e)11,325 7 3 | .. |
| *Central Circle.* | | | | | | | | |
| Direction, Central Circle .. | .. | 1,035 5 11 | 1,035 5 11 | 8 9 7 | 1,094 14 9 | 1,103 8 4 | 68 2 5 | .. |
| Guntur .. .. .. | .. | 38,912 9 11 | 38,912 9 11 | 211 13 5 | 38,997 11 7 | 39,209 9 0 | 298 15 1 | .. |
| Nellore .. .. .. | .. | 55,185 12 6 | 55,185 12 6 | 1,792 7 7 | 54,206 10 10 | 55,999 2 5 | 813 5 11 | .. |
| Cuddapah, North .. .. | .. | 9,342 10 4 | 9,342 10 4 | 147 0 10 | 10,232 5 3 | 10,379 6 1 | 1,036 11 9 | .. |
| Do. South .. .. | .. | 82,233 12 10 | 82,233 12 10 | 2,285 11 7 | 80,858 9 7 | 83,144 5 2 | 910 8 4 | .. |
| Do. West .. .. | .. | 65,712 9 3 | 65,712 9 3 | 942 10 2 | 65,989 14 3 | 66,932 8 5 | 1,219 15 2 | .. |
| Bellary .. .. .. .. | .. | 42,234 3 3 | 42,234 3 3 | 437 5 4 | 42,752 4 8 | 43,189 10 0 | 955 6 9 | .. |
| Anantapur .. .. .. | .. | 44,323 8 5 | 44,323 8 5 | 938 4 1 | 44,300 14 2 | 45,239 2 3 | 915 9 10 | .. |
| Chittoor .. .. .. | .. | 52,923 8 2 | 52,923 8 2 | 248 1 0 | 53,362 5 6 | 53,610 6 6 | 686 14 4 | .. |
| Chingleput .. .. .. | .. | 26,734 12 1 | 26,734 12 1 | 331 4 6 | 26,907 13 9 | 27,239 2 3 | 504 6 2 | .. |
| Working Plans office, Bellary. | .. | 99 13 9 | 99 13 9 | .. | 99 13 9 | 99 13 9 | .. | .. |
| Total .. | .. | 4,18,738 10 5 | 4,18,738 10 5 | 7,343 4 1 | 4,18,803 6 1 | 4,26,146 10 2 | 7,407 15 9 | .. |
| *Southern Circle.* | | | | | | | | |
| Direction, Southern Circle .. | .. | 1,955 12 10 | 1,955 12 10 | 50 3 0 | 1,967 13 3 | 2,018 0 3 | 62 3 5 | .. |
| Vellore, North .. .. | .. | 48,271 7 4 | 48,271 7 4 | 1,109 3 2 | 48,049 15 7 | 49,159 2 9 | 887 11 5 | .. |
| Do. South .. .. | .. | 61,812 8 5 | 61,812 8 5 | 1,535 7 10 | 60,992 13 2 | 62,528 5 0 | 715 12 7 | .. |
| Do. West .. .. | .. | 6,954 3 4 | 6,954 3 4 | .. | 8,846 13 10 | 8,846 13 10 | 1,892 10 6 | .. |
| Arcot, South cum Tanjore .. | .. | 26,571 3 3 | 26,571 3 3 | 521 12 7 | 26,244 6 2 | 26,766 2 9 | 194 15 6 | .. |
| Salem, North .. .. .. | .. | 62,038 0 2 | 62,038 0 2 | 777 12 1 | 61,863 12 7 | 62,641 8 8 | 603 8 6 | .. |
| Do. South .. .. .. | .. | 49,412 0 11 | 49,412 0 11 | 1,530 0 11 | 49,348 2 8 | 50,878 3 7 | 1,466 2 8 | .. |
| Trichinopoly .. .. .. | .. | 36,726 3 10 | 36,726 3 10 | 377 2 2 | 37,033 0 6 | 37,410 2 8 | 683 14 10 | .. |
| Madura .. .. .. | .. | 81,099 13 7 | 81,099 13 7 | 2,379 7 11 | 79,830 10 4 | 82,210 2 3 | 1,110 4 8 | .. |
| Tinnevelly cum Ramnad .. | .. | 51,454 9 8 | 51,454 9 8 | 1,267 7 1 | 51,506 0 0 | 52,773 7 1 | 1,318 13 5 | .. |
| Forest Engineer .. .. | .. | 4,176 7 6 | 4,176 7 6 | .. | 4,451 7 6 | 4,451 7 6 | 275 0 0 | .. |
| Total .. | .. | 4,30,472 6 10 | 4,30,472 6 10 | 9,548 8 9 | 4,30,134 15 7 | 4,39,683 8 4 | 9,211 1 6 | .. |
| *Western Circle.* | | | | | | | | |
| Direction, Western Circle .. | .. | 982 5 7 | 982 5 7 | 80 8 9 | 902 13 6 | 983 6 3 | 1 0 8 | .. |
| The Nilgiris .. .. .. | .. | 1,38,785 0 1 | 1,38,785 0 1 | 3,316 15 5 | 1,39,740 1 9 | 1,43,057 1 2 | 4,272 1 1 | .. |
| North Coimbatore .. .. | .. | 64,044 3 10 | 64,044 3 10 | 2,472 12 5 | 62,903 6 1 | 65,376 2 6 | 1,331 14 8 | .. |
| Central do. .. .. | .. | 42,327 8 3 | 42,327 8 3 | 1,392 15 11 | 42,734 6 4 | 44,127 6 3 | 1,799 14 0 | .. |
| South do. .. .. | .. | 90,182 2 8 | 90,182 2 8 | 5,015 8 0 | 89,256 1 8 | 94,271 9 8 | 4,089 7 0 | .. |
| Kollegal .. .. .. | .. | 45,741 15 0 | 45,741 15 0 | 1,114 10 3 | 45,780 3 3 | 46,894 13 6 | 1,152 14 6 | .. |
| North Malabar .. .. | .. | 65,670 5 5 | 65,670 5 5 | 1,967 14 5 | 65,426 10 2 | 67,394 8 7 | 1,724 3 2 | .. |
| South do. .. .. | .. | 74,347 10 9 | 74,347 10 9 | 3,792 7 3 | 75,056 1 1 | 78,848 8 4 | 4,500 13 7 | .. |
| North Mangalore .. .. | .. | 38,019 3 9 | 38,019 3 9 | 1,103 14 1 | 37,452 4 5 | 38,556 2 6 | 536 14 9 | .. |
| South do. .. .. | .. | 36,841 0 11 | 36,841 0 11 | 1,828 2 9 | 36,571 10 6 | 38,399 13 3 | 1,558 12 4 | .. |
| Working Plans office .. .. | .. | 15,815 15 8 | 15,815 15 8 | 155 12 9 | 16,431 14 1 | 16,587 10 10 | 771 11 2 | .. |
| Total .. | .. | 6,12,757 7 11 | 6,12,757 7 11 | 22,241 10 0 | 6,12,255 8 10 | 6,34,497 2 10 | 21,739 10 11 | .. |
| Grand total, Presidency. .. | .. | 19,84,406 7 9 | 19,84,406 7 9 | 53,780 6 10 | 19,80,310 4 4 | 20,34,090 11 2 | 49,684 3 5 | .. |

(a) Excludes Rs. 18.077—2—4 belonging to Parlakimedi Maliahs.
(b) Excludes Rs. 659—4—1 do. do.
(c) Do. Rs. 17,911-15—0 do. do.
(d) Do. Rs. 18,571—3—1 do. do.
(e) Do. Rs. 494—0—9 do. do.

ACCOUNTANT-GENERAL'S OFFICE,
MADRAS, 1st *September*, 1917.

R. SRINIVASA AYYAR,
*Deputy Accountant-General.*

## ANNUAL FORM No. 82.

*Forest Department, Madras Presidency.*

Revenue received and outstandings on account of revenue during 1916-17.

| District. | Particulars. | Outstandings at commencement of year. | Value of sales and other revenue during year. | Total. | Amount realized during year. | Balance due to the department at end of year. |
|---|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| *Northern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 752 5 5 | 752 5 5 | 752 5 5 | .. |
| Ganjam .. .. .. | Do. | (n) 3,127 7 0 | (n) 56,188 15 0 | (n) 59,316 6 0 | 51,242 9 0 | (b) 8,073 13 0 |
| Vizagapatam .. .. | Do. | 7,232 12 0 | 64,343 5 9 | 71,576 1 9 | 49,586 4 1 | (c) 21,989 13 8 |
| Golconda Hill Madgole .. | Do. | .. | 3,019 0 0 | 3,019 0 0 | 3,019 0 0 | .. |
| Godavari, Upper .. .. | Do. | 595 15 2 | 45,700 5 6 | 46,296 4 8 | 31,985 2 8 | (d) 14,311 2 0 |
| Do. Lower .. .. | Do. | (a) 57,759 4 0 | 2,65,725 14 1 | 3,23,485 2 1 | 2,63,972 15 5 | (e) 59,512 2 8 |
| Kistna .. .. .. | Do. | 20,403 8 6 | 1,59,210 12 11 | 1,79,614 5 5 | 1,66,935 7 0 | (f) 12,678 14 5 |
| Kurnool, East .. .. | Do. | 1,300 0 0 | 66,847 12 3 | 68,147 12 3 | 64,800 11 3 | (g) 3,347 1 0 |
| Do. South .. .. | Do. | 1,934 14 0 | 1,37,177 15 6 | 1,39,112 13 6 | 94,454 8 2 | (h) 44,658 5 4 |
| Do. West .. .. | Do. | 12,728 7 0 | 1,82,351 14 6 | 1,95,080 5 6 | 1,17,962 9 6 | (i) 77,117 12 0 |
| | Total .. | (a) 1,05,082 3 8 | 9,81,318 4 11 | 10,86,400 8 7 | 8,44,711 8 6 | 2,41,689 0 1 |
| *Central Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | .. | .. | .. | .. |
| Bellary .. .. .. | Do. | 55,911 3 10<br>(j) — 30 0 0<br>(k) — 6 6 0 | 1,36,356 6 10 | 1,92,231 4 8 | 1,86,862 13 4 | 5,368 7 4 |
| Anantapur .. .. .. | Do. | 26,107 15 4 | 6,71,314 15 8 | 6,97,422 15 0 | 3,48,265 1 2 | 3,49,157 13 10 |
| Guntur .. .. .. | Do. | 14,018 4 8 | 2,79,548 15 3 | 2,93,567 3 11 | 2,82,445 4 2 | 11,121 15 9 |
| Cuddapah, North .. .. | Do. | .. | 16,457 13 0 | 16,457 13 0 | 10,419 11 0 | 6,038 2 0 |
| Do. South .. .. | Do. | 21,273 14 9<br>(l) — 519 4 0 | 90,185 12 2 | 1,10,940 6 11 | 95,432 3 11 | 15,508 3 0 |
| Do. West .. .. | Do. | 3,607 9 10<br>(m) — 1 0 0 | 78,908 5 1 | 82,514 14 11 | 76,184 0 9 | 6,330 14 2 |
| Nellore .. .. .. | Do. | 55,595 2 6 | 2,60,112 14 11 | 3,15,708 1 5 | 2,12,613 12 9 | 1,03,094 4 8 |
| Chingleput .. .. .. | Do. | 7,904 0 0 | 91,731 2 9 | 99,635 2 9 | 91,155 12 10 | 8,479 5 11 |
| Chittoor .. .. .. | Do. | 17,249 2 8 | 1,52,550 2 1 | 1,69,799 4 9 | 1,32,906 12 9 | 36,892 8 0 |
| | Total .. | 2,01,667 5 7<br>— 556 10 0 | 17,77,166 7 9 | 19,78,277 3 4 | 14,36,285 8 8 | 5,41,991 10 8 |
| *Southern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 3,59,165 0 0 | 3,59,165 0 0 | 3,59,165 0 0 | .. |
| Vellore, North .. .. | Do. | 24,321 10 4 | 1,32,998 4 5 | 1,57,319 14 9 | 1,44,451 0 0 | 12,868 14 9 |
| Do. South .. .. | Do. | 79,380 0 4 | 1,19,729 5 6 | 1,99,109 5 10 | 1,60,351 0 0 | 25,936 7 4 |
| Do. West .. .. | Do. | | | | | 12,821 14 6 |
| Arcot, South cum Tanjore .. | Do. | 16,096 0 1 | 3,69,892 11 0 | 3,85,988 11 1 | 1,59,136 0 0 | 2,26,852 11 1 |
| Salem, North .. .. | Do. | 16,931 3 7 | 1,43,662 3 6 | 1,60,593 7 1 | 1,34,791 0 0 | 25,802 7 1 |
| Do. South .. .. | Do. | 89,201 0 11 | 69,621 2 11 | 1,58,822 3 10 | 1,02,481 0 0 | 56,341 3 10 |
| Trichinopoly .. .. .. | Do. | 16,067 10 5 | 92,852 14 8 | 1,08,920 9 1 | 1,02,355 0 0 | 6,565 9 1 |
| Madura .. .. .. | Do. | 29,290 9 0 | 1,07,900 13 10 | 1,37,191 6 10 | 98,002 0 0 | 39,189 6 10 |
| Tinnevelly cum Ramnad .. | Do. | 13,031 11 8 | 1,43,636 3 2 | 1,56,667 14 10 | 1,45,364 0 0 | 11,303 14 10 |
| | Total .. | 2,84,319 14 4 | 15,39,458 11 0 | 18,23,778 9 4 | 14,06,096 0 0 | 4,17,682 9 4 |
| *Western Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 184 0 0 | 184 0 0 | 184 0 0 | .. |
| Mangalore, North .. | Do. | 5,445 13 1<br>* — 18 14 0 | 81,950 13 10 | 87,377 12 11 | 81,013 0 0<br>† 98 0 0 | 6,266 12 11 |
| Do. South .. | Do. | 2,274 15 11<br>* — 54 12 0 | 51,401 11 8 | 53,621 15 7 | 51,426 0 0<br>† 10 11 3 | 2,185 4 4 |
| Malabar, North .. .. | Do. | 10,784 0 0 | 1,54,855 15 7 | 1,65,639 15 7 | 1,07,633 0 0<br>† 70 3 8 | 57,936 11 11 |
| Do. South .. .. | Do. | 1,955 0 4 | 1,72,590 11 0 | 1,74,545 11 4 | 1,70,790 0 0<br>† 96 3 4 | 3,659 8 0 |
| The Nilgiris .. .. .. | Do. | 4,909 0 2 | 1,00,732 10 11 | 1,05,641 11 1 | 98,953 0 0<br>† 10 12 0 | 6,677 15 1 |
| Kollegal .. .. .. | Do. | 3,398 4 0 | 1,22,781 4 0 | 1,26,179 8 0 | 5,572 0 0 | 607 8 0 |
| Coimbatore, North .. .. | Do. | 8,609 11 4 | 1,51,535 4 10 | 1,60,145 0 2 | 1,44,112 0 0 | 16,033 0 2 |
| Do. Central .. .. | Do. | 10,493 7 10 | 1,38,115 5 8 | 1,48,608 13 6 | 90,165 0 0<br>† 249 3 10 | 58,194 9 8 |
| Do. South .. .. | Do. | 55,764 10 0 | 1,89,772 1 3 | 2,45,536 11 3 | 2,22,069 0 0 | 23,467 11 3 |
| Working Plans office .. | Do. | .. | 5 0 0 | 5 0 0 | 5 0 0 | .. |
| | Total .. | 1,03,634 14 8<br>* — 73 10 0 | 11,63,924 14 9 | 12,67,486 3 5 | 10,91,922 0 0<br>† 535 2 1 | 1,75,029 1 4 |
| Grand total, Presidency .. | | 6,94,074 2 3 | 54,61,868 6 5 | 61,55,942 8 8 | 47,79,550 3 3 | 13,76,392 5 5 |

(a) A sum of Rs. 1,925 was erroneously shown as due in 1915-16 instead of in 1916-17.
(b) Includes Rs. 6,966-8-0 due in 1917-18 and Rs. 386 covered by E.M.D.
(c) Includes Rs. 21,901-14-0 due in 1917-18.
(d) Includes Rs. 14,170 due in 1917-18
(e) Includes Rs. 52,112-12-0 due in 1917-18 and Rs. 4,990-6-8 covered by E.M.D.
(f) Includes Rs. 12,594-10-8 due in 1917-18.
(g) Includes Rs. 2,600 due in 1917-18.
(h) Includes Rs. 44,273-5-4 due in 1917-18 and Rs. 206 covered by E.M.D.
(i) Includes Rs. 58,207-12-0 due in 1917-18 and Rs. 18,786 covered by E.M.D.
(j) Demand reduced in Board's Proceedings, Forest No. 124, Rout., dated 30th January 1917.
(k) Written off in Conservator's S.O. No. 101, dated 10th August 1916.
(l) Written off in Board's Proceedings, Forest No. 306-R., dated 9th March 1917.
(m) Erroneous demand.
(n) Excludes Rs. 8,580 belonging to the Parlakimedi Maliahs.
* Deduction due to erroneous demand and collection in the previous year.
† Written off the accounts.

NOTE.—Out of the total outstandings of Rs. 1,75,029-1-4 the amount actually due on or before 30th June 1917 was Rs. 78,739-8-0.

## ANNUAL FORM No. 83.

*Forest Department, Madras Presidency.*

Financial results of the year 1916-17.

| District. | Timber and other produce removed from the forests by Government Agency. | | Other revenue. | | Formation, protection and improvement of forests. | Total. | |
|---|---|---|---|---|---|---|---|
| | Receipts. | Charges. | Receipts. | Charges. | Charges. | Receipts. | Charges |
| *Northern Circle.* | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjam .. .. | (*b*)10,287 | (*c*)11,615 | (*d*)41,047 | (*e*)47,728 | (*f*)25,183 | (*g*)51,334 | (*h*)84,526 |
| Vizagapatam .. .. | 636 | 3,035 | 48,977 | 26,874 | 5,989 | 49,613 | 35,898 |
| Golugonda and Madgole Agency. | .. | 1,553 | 3,020 | 4,976 | .. | 3,020 | 6,529 |
| Godavari, Upper .. | 303 | 6,231 | 31,698 | 30,702 | 25,182 | 32,001 | 62,115 |
| Do. Lower .. | 4,017 | 8,310 | 2,60,108 | 70,760 | 20,255 | 2,64,125 | 99,325 |
| Kistna .. .. .. | 452 | 2,010 | 1,66,568 | 34,646 | 15,483 | 1,67,020 | 52,139 |
| Kurnool, East .. | 12,021 | 9,693 | 52,886 | 33,942 | 47,855 | 64,907 | 91,490 |
| Do. South .. | 5,922 | 3,144 | 88,614 | 47,182 | 34,234 | 94,536 | 84,560 |
| Do. West .. | 22,048 | 30,543 | 96,108 | 53,712 | 49,212 | 1,18,156 | 1,33,467 |
| Total .. | 55,686 | 76,134 | 7,89,026 | 3,50,522 | 2,23,393 | 8,44,712 | 6,50,049<br>(*a*) 25,935 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | 280 | 14 | 1,86,583 | 51,844 | 25,575 | 1,86,863 | 77,433 |
| Anantapur .. .. | 59 | .. | 3,48,206 | 35,912 | 25,008 | 3,48,265 | 60,920 |
| Guntur .. .. | 158 | 18 | 2,82,287 | 35,547 | 20,968 | 2,82,445 | 56,533 |
| Cuddapah, North .. | .. | .. | 10,420 | 11,552 | 5,731 | 10,420 | 17,283 |
| Do. South .. | 447 | .. | 94,985 | 55,114 | 36,542 | 95,432 | 91,656 |
| Do. West .. | 86 | .. | 76,098 | 35,526 | 36,876 | 76,184 | 72,402 |
| Nellore .. .. .. | 12,581 | 4,264 | 2,00,033 | 59,245 | 47,400 | 2,12,614 | 1,10,909 |
| Chingleput .. .. | 148 | 22 | 91,008 | 22,345 | 15,830 | 91,156 | 38,197 |
| Chittoor .. .. | 223 | 233 | 1,32,684 | 42,281 | 29,131 | 1,32,907 | 71,645 |
| Total .. | 13,982 | 4,551 | 14,22,304 | 3,49,366 | 2,43,061 | 14,36,286 | 5,96,978<br>(*a*) 11,699 |
| *Southern Circle.* | | | | | | | |
| Vellore, North .. | 2,528 | 1,539 | 1,44,557 | 37,053 | 24,223 | 1,47,085 | 62,825 |
| Do. South and West | 2,46,848 | 16,539 | 1,49,678 | 58,820 | 95,265 | 3,96,526 | 1,70,624 |
| Arcot, South cum Tanjore. | 169 | 100 | 1,58,967 | 21,837 | 18,213 | 1,59,136 | 40,150 |
| Salem, North .. .. | 61,304 | 7,666 | 1,31,448 | 51,050 | 24,204 | 1,92,752 | 82,920 |
| Do. South .. .. | 49,755 | 5,023 | 1,02,484 | 37,476 | 20,576 | 1,52,189 | 63,075 |
| Trichinopoly .. .. | 12,882 | 4,370 | 1,01,914 | 35,115 | 14,772 | 1,14,796 | 54,257 |
| Madura .. .. | 746 | 177 | 97,260 | 51,829 | 41,789 | 98,005 | 93,795 |
| Tinnevelly cum Ramnad. | 2,279 | 1,121 | 1,43,328 | 43,476 | 23,593 | 1,45,607 | 68,190 |
| Total .. | 3,76,510 | 36,535 | 10,29,586 | 3,36,656 | 2,62,645 | 14,06,096 | 6,35,836<br>(*a*) + 3,933 |
| *Western Circle.* | | | | | | | |
| Mangalore, North .. | 2,244 | 8,001 | 78,789 | 32,847 | 8,888 | 81,033 | 49,736 |
| Do. South .. | 3,815 | 9,433 | 47,681 | 27,861 | 12,400 | 51,446 | 49,634 |
| Malabar, North .. | 62,193 | 21,613 | 45,460 | 34,366 | 26,098 | 1,07,653 | 82,077 |
| Do. South .. | 1,61,690 | 55,848 | 9,121 | 13,480 | 39,051 | 1,70,811 | 1,08,379 |
| The Nilgiris .. .. | 58,519 | 91,524 | 40,455 | 20,796 | 54,366 | 98,974 | 1,66,686 |
| Kollegal .. .. | 92,105 | 7,922 | 33,487 | 21,288 | 22,822 | 1,25,592 | 52,032 |
| Coimbatore, North .. | 31,077 | 4,842 | 1,13,056 | 47,637 | 31,695 | 1,44,133 | 84,174 |
| Do. Central .. | 3,052 | 1,764 | 87,133 | 20,627 | 1,07,471 | 90,185 | 1,29,862 |
| Do. South .. | 1,00,664 | 39,585 | 1,21,431 | 69,074 | 28,705 | 2,22,095 | 1,37,364 |
| Total .. | 5,15,359 | 2,40,532 | 5,76,563 | 2,87,916 | 3,31,496 | 10,91,922 | 8,59,944 * |
| Grand total, Presidency. | 961,527 | 357,752 | 38,17,479 | 18,24,460 | 10,60,595 | 47,79,016 | 27,42,807 †<br>41,567 ‡ |

(*a*) Refunds and drawbacks.
(*b*) Excludes Rs. 6,803, belonging to Parlakimedi Maliahs.
(*c*) Do. 16,219 do. do.
(*d*) Do. 17,185 do. do.
(*e*) Do. 322 do. do.
(*f*) Do. 31,186 do. do.
(*g*) Do. 23,988 do. do.
(*h*) Do. 47,727 do. do.

* Includes refunds.

† Includes refunds of the Western Circle.

‡ Refunds and drawbacks of Northern, Central and Southern Circles.

## ANNUAL FORM No. 84.

*Forest Department, Madras Presidency.*

### PART I.

Statement of elephants and other live-stock during 1916-17.

| District. | On hand at the commencement of the year. | | Number received during the year. | Number disposed of during the year. | On hand at the end of the year. | | Total expenditure on maintenance during the year. |
|---|---|---|---|---|---|---|---|
| | Number. | Value. | | | Number. | Value. | |
| **(1) ELEPHANTS.** | | | | | | | |
| *Northern Circle.* | | Rs. | | | | Rs. | Rs. A. P. |
| Ganjam .. .. | (a) 8 | (b) 4,950 | .. | 1 | 2 | * 2,700 | (c) 1,808 3 5 |
| Vizagapatam .. .. | 1 | 1,500 | .. | .. | 1 | * 3,000 | 882 10 4 |
| Godavari, Upper .. .. | 2 | 3,700 | .. | .. | 2 | 3,700 | 1,641 15 11 |
| Kurnool, West .. .. | 2 | 3,100 | .. | .. | 2 | * 5,500 | 1,518 6 2 |
| Total .. | 8 | 13,250 | .. | 1 | 7 | 14,900 | 5,851 3 10 |
| *Central Circle*—Nil. | | | | | | | |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, South .. .. | 5 | 13,650 | 1 | 2 | 4 | 14,500 | 3,028 13 11 |
| Malabar, North .. .. | 21 | 63,300 | 11 | 13 | 19 | 57,950 | 9,982 14 8 |
| Do. South .. .. | 23 | 81,100 | 20 | 5 | 38 | 1,34,600 | 13,109 1 1 |
| The Nilgiris .. .. | 42 | 1,31,700 | 15 | 31 | 26 | 65,550 | 17,170 7 0 |
| Coimbatore, South .. | 14 | 47,800 | 11 | 8 | 17 | 57,600 | 8,501 6 8 |
| Total .. | 105 | 3,37,550 | 58 | 59 | 104 | 3,30,200 | 51,792 11 4 |
| Grand total (Elephants), Presidency. | 113 | 3,50,800 | 58 | 60 | 111 | 3,45,1 10 | 57,643 15 2 |
| **(2) OTHER LIVE-STOCK.** | | | | | | | |
| *Northern Circle.* | | | | | | | |
| Kurncol, East .. .. | 1 | 20 | .. | 1 | .. | .. | .. |
| Do. South .. .. | 6 | 198 | .. | 6 | .. | .. | 198 6 0 |
| Do. West .. .. | 20 | 1,000 | .. | 2 | 18 | 900 | 1,803 9 4 |
| Total .. | 27 | 1,218 | .. | 9 | 18 | 900 | 2,001 15 4 |
| *Central Circle.* | | | | | | | |
| Chittoor .. .. .. | 3 | 65 | 1 | 1 | 3 | 82 | .. |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Malabar, North .. .. | 2 | 80 | .. | 2 | .. | .. | 211 10 5 |
| Do. South .. .. | 33 | 1,556 | 8 | 7 | 34 | 1,620 | 2,625 7 4 |
| The Nilgiris .. .. | 11 | 735 | .. | 2 | 9 | 635 | 1,001 0 9 |
| Coimbatore, South .. .. | 66 | 4,729 | 14 | 9 | 71 | 4,439 | 9,023 13 0 |
| Total .. | 112 | 7,100 | 22 | 20 | 114 | 6,694 | 12,861 15 6 |
| Grand total (Other Live-stock), Presidency. | 142 | 8,383 | 23 | 30 | 135 | 7,676 | 14,863 14 10 |

* Values of the elephants as estimated by the Special Veterinary Inspector.
(a) Excludes 2 elephants belonging to Parlakimedi Maliahs.
(b) Excludes Rs. 4,500 being value of elephants belonging to Parlakimedi Maliahs.
(c) Excludes Rs. 1,447 being the maintenance charges of elephants, incurred in Parlakimedi Maliahs.

## PART II.

### Statement of elephants gone off the list during the year.

| District. | Names. | When purchased or otherwise obtained by Government. | Age. | How disposed of. |
|---|---|---|---|---|
| | | *Northern Circle.* | | |
| Ganjam .. | Hilda .. .. | Captured in April 1907 and transferred from South Coimbatore to the Ganjam district in 1915–16. | YRS. 30 | Died on 24th April 1917. |
| | | *Central Circle*—Nil. | | |
| | | *Southern Circle*—Nil. | | |
| | | *Western Circle.* | | |
| Mangalore, South. | 1. Leela .. .. | Captured on 1st June 1915 .. .. .. | 12 | Sold. |
| | 2. Padmavati .. | Born on 9th February 1915 .. .. .. | 1 | Died. |
| Malabar, North. | 1. Indravati .. | Do. 1st ,, 1914 .. .. | 3 | Sold. |
| | 2. Kumudam .. | Do. 31st January 1914 .. .. | 3 | |
| | 3. Rugmani .. | Do. 13th March 1914 .. .. | 3 | |
| | 4. Janaki .. .. | Do. 15th January 1915 .. .. .. | 2½ | Transferred to The Nilgiris. |
| | 5. Lakshmi .. | Captured on 23rd December 1915 .. | 5½ | Sold. |
| | 6. Lucy .. .. | Do. 8th February 1916 .. .. | 6 | |
| | 7. Krishna .. | Do. 30th March 1916 .. .. | 16 | Transferred to The Nilgiris. |
| | 8. Rolly .. .. | Do. 17th April 1916 .. .. | 15 | |
| | 9. Nundy .. .. | Do. 14th March 1917 .. .. | 7 | Sold. |
| | 10. Phyllis .. | Purchased in 1878 .. .. .. .. | 65 | Transferred to South Malabar. |
| | 11. Samson .. | Do. in 1884 .. .. .. .. | 40 | |
| | 12. Isabella .. | Captured on 17th February 1898 .. .. | 39 | |
| | 13. Dostijehan .. | Born on 3rd February 1902 .. .. .. | 15 | |
| Malabar, South. | 1. Meenakshi II .. | Captured on 13th August 1904 .. .. | 15 | Transferred South Coimbatore. |
| | 2. Gangadin .. | Do. 27th March 1915 .. .. | 7 | Sold. |
| | 3. Suvala .. | Do. 2nd February 1916 .. .. | 3 | |
| | 4. Kermanshah .. | Do. 28th March 1916 .. .. | 11 | Died. |
| | 5. Sollum .. .. | Do. 12th April 1916 .. .. | 7 | Transferred to The Nilgiris. |
| The Nilgiris. | 1. Chick Lakshmi. | Do. 30th January 1882 .. .. | 58 | Transferred to South Malabar. |
| | 2. Padmini .. | Do. 10th February 1896 .. .. | 41 | |
| | 3. Marce .. .. | Do. 20th March 1906 .. .. | 20 | |
| | 4. Togo .. .. | Do. 19th June 1905 .. .. | 14 | |
| | 5. Madavan .. | Do. 12th March 1906 .. .. | 14 | |
| | 6. Hector .. .. | Do. 13th April 1906 .. .. | 17 | |
| | 7. Shanker .. | Do. 21st May 1907 .. .. | 14 | |
| | 8. Libera .. .. | Do. 5th March 1909 .. .. | 22 | |
| | 9. Cæsar .. .. | Do. 12th February 1910 .. .. | 13 | |
| | 10. Kamala .. | Do. 3rd ,, 1912 .. .. | 24 | |
| | 11. Lally .. .. | Do. 30th May 1913 .. .. .. | 25 | |
| | 12. Drona .. .. | Do. 2nd ,, 1914 .. .. | 10 | |
| | 13. Damayanti .. | Do. 30th April ,, .. .. | 27 | |
| | 14. Valmiki .. | Do. 12th May ,, .. .. | 10 | |
| | 15. Baker Ali .. | Do. 10th ,, 1911 .. .. | 16 | |
| | 16. Kamakshi .. | Do. 11th April 1914 .. .. | 20 | |
| | 17. Etona .. .. | Do. 4th June 1907 .. .. | 16 | Transferred to South Coimbatore. |
| | 18. Empress .. | Do. 19th February 1910 .. .. | 28 | |
| | 19. Kabbani .. | Do. 18th May 1913 .. .. | 33 | |
| | 20. Hanuman .. | Do. 21st February 1905 .. .. | 23 | |
| | 21. Dolly .. .. | Do. 24th April 1915 .. .. | 2 | Sold. |
| | 22. Navamani .. | Do. do. .. .. | 3 | |
| | 23. Hussain .. | Do. 6th February 1915 .. .. | 10 | |
| | 24. Chittar .. | Do. 31st March 1915 .. .. | 2 | |
| | 25. Vaigai .. | Do. 1st April ,, .. .. | 14 | Died. |
| | 26. Sulaiman .. | Do. 5th ,, ,, .. .. | 18 | |
| | 27. Achutha .. | Do. 12th June 1915 .. .. | 34 | |
| | 28. Sollum .. .. | Do. 12th April 1916 .. .. | 7½ | Do. |
| | 29. Mukarti .. | Do. 7th February 1917 .. .. | .. | Destroyed. |
| | 30. Anaikatti .. | Do. 17th ,, .. .. | ½ | Died. |
| | 31. Abdulla .. | Do. 13th ,, .. .. | ½ | |
| Coimbatore, South. | 1. Harischandra .. | Born on 21st November 1912 .. .. | 25 | Died. |
| | 2. Ganga .. .. | Captured on 3rd September 1915 .. .. | 7 | Transferred to The Nilgiris. |
| | 3. Bagirati .. | Do. 26th November ,, .. .. | 7 | |
| | 4. Tippu .. .. | Do. 23rd July 1916 .. .. | 15 | Died. |
| | 5. Lakshmi .. | Do. 24th November 1916 .. .. | 2 | Sold. |
| | 6. Kalyani .. | Do. do. .. .. | 8½ | Transferred to The Nilgiris. |
| | 7. Akbar .. .. | Do. 28th December 1916 .. .. | ½ | Died. |
| | 8. Savitri .. .. | Do. 30th November ,, .. .. | 1 | Sold. |
| | | | 7 | Died. |

## Annual Form No. 85.

*Forest Department, Madras Presidency.*

Abstract showing the value of stores, tools and plant for 1916–17.

| District. | Buildings. | | | | Stores. | | | | Totals. | | | | Difference in value | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | In favour of the year. | Against the year. |
| | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | | |
| | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | Rs. | Rs. |
| *Northern Circle.* | | | | | | | | | | | | | | |
| Direction .. | 1 | 1,600 | 1 | 1,590 | 406 | 2,413 | 410 | 2,089 | 407 | 4,013 | 411 | 3,679 | .. | 334 |
| Ganjam .. | 145 | 55,744 | 144 | 49,575 | (b)2,584 | (c)7,004 | (d) 3,418 | (e) 7,528 | (b)2,729 | (c)62,748 | (d)3,562 | (e)57,103 | .. | (f)5,645 |
| Vizagapatam .. | 97 | 10,793 | 94 | 10,596 | 1,467 | 2,871 | 1,460 | 4,255 | 1,564 | 13,664 | 1,554 | 14,851 | 1,187 | .. |
| Gōdāvari, Upper. | 126 | *30,184 | 126 | 28,850 | *3,079 | *17,014 | 3,117 | 16,167 | *3,205 | *47,198 | 3,243 | 45,017 | .. | 2,181 |
| Gōdāvari, Lower. | 143 | 49,684 | 155 | 46,499 | 1,947 | 7,150 | 2,229 | 4,664 | 2,090 | 54,834 | 2,384 | 51,163 | .. | 3,671 |
| Kistna .. | 46 | 5,660 | 39 | 5,443 | 1,354 | 9,348 | 1,326 | 9,759 | 1,400 | 15,008 | 1,365 | 15,212 | 204 | .. |
| Kurnool, East. | 41 | 46,140 | 52 | 50,824 | 3,316 | 6,114 | 3,128 | 6,090 | 3,357 | 52,254 | 3,180 | 56,914 | 4,660 | .. |
| Do. South. | 62 | 44,677 | 69 | 52,628 | 3,325 | 8,274 | 2,900 | 7,343 | 3,387 | 52,951 | 2,969 | 59,971 | 7,020 | .. |
| Do. West. | 106 | 82,550 | 110 | 83,891 | 5,231 | 12,149 | 5,581 | 12,922 | 5,337 | 94,699 | 5,691 | 96,813 | 2,114 | .. |
| Total .. | 767 | 3,27,032 | 780 | 3,29,896 | 22,709 | 70,337 | 23,569 | 70,827 | 23,476 | 3,97,369 | 24,359 | 4,00,723 | 3,354 | .. |
| *Central Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 257 | 2,692 | 375 | 3,096 | 257 | 2,692 | 375 | 3,096 | 404 | .. |
| Bellary .. | 55 | 70,027 | 50 | 65,550 | (a)3,486 | 8,311 | 3,451 | 13,156 | 3,541 | 78,338 | 3,501 | 78,706 | 368 | .. |
| Anantapur .. | 36 | 53,683 | 36 | 53,683 | 2,668 | 7,330 | 2,788 | 6,502 | 2,704 | 61,013 | 2,824 | 60,185 | .. | 828 |
| Guntūr .. | 31 | 11,773 | 31 | 11,569 | 2,013 | 9,147 | 2,031 | 7,565 | 2,044 | 20,920 | 2,062 | 19,134 | .. | 1,786 |
| Cuddapah, North. | 89 | 28,772 | 54 | 24,548 | 1,377 | 6,346 | 1,257 | 2,940 | 1,466 | 35,118 | 1,311 | 27,488 | 17,662 | .. |
| Cuddapah, South. | | | 50 | 25,168 | | | 874 | 4,208 | | | 924 | 29,376 | | |
| Cuddapah, West. | 38 | 10,230 | 31 | 7,157 | 1,755 | 5,008 | 1,393 | 3,997 | 1,793 | 15,238 | 1,424 | 11,154 | | |
| Nellore .. | 49 | 34,276 | 54 | 34,742 | 46,057 | 35,266 | 45,943 | 33,564 | 46,106 | 69,542 | 45,997 | 68,306 | .. | 1,236 |
| Chingleput .. | 29 | 11,310 | 26 | 10,623 | 1,720 | 4,302 | 1,591 | 3,191 | 1,749 | 15,612 | 1,617 | 13,814 | .. | 1,798 |
| Chittoor .. | 47 | 23,247 | 43 | 21,947 | 2,733 | 5,151 | 2,774 | 4,774 | 2,780 | 28,398 | 2,817 | 26,721 | .. | 1,677 |
| Vernacular Training School. | .. | .. | .. | .. | .. | .. | 469 | 933 | .. | .. | 469 | 933 | 933 | .. |
| Total .. | 374 | 2,43,318 | 375 | 2,54,987 | 62,066 | 83,553 | 62,946 | 83,926 | 62,440 | 3,26,871 | 63,321 | 3,38,913 | 12,042 | .. |
| *Southern Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 177 | 2,549 | 184 | 2,415 | 177 | 2,549 | 184 | 2,415 | .. | 134 |
| North Vellore. | 49 | 22,853 | 43 | 22,036 | 1,785 | 5,036 | 1,638 | 4,665 | 1,834 | 27,889 | 1,681 | 26,701 | .. | 1,188 |
| South do. | 31 | 15,922 | 35 | 24,565 | 2,114 | 6,637 | 2,875 | 5,619 | 2,145 | 22,559 | 2,910 | 30,184 | 7,625 | .. |
| West do. | 17 | 13,770 | 19 | 17,502 | 993 | 2,581 | 1,128 | 4,103 | 1,010 | 16,351 | 1,147 | 21,605 | 5,254 | .. |
| South Arcot cum Tanjore. | 43 | 24,685 | 38 | 20,657 | 1,723 | 3,618 | 1,674 | 3,389 | 1,766 | 28,303 | 1,712 | 24,046 | .. | 4,257 |
| North Salem .. | 115 | 97,786 | 120 | 51,291 | 2,382 | 8,028 | 2,587 | 6,562 | 2,497 | 1,05,814 | 2,707 | 57,853 | .. | 47,961 |
| South do. .. | 61 | 44,279 | 61 | 41,752 | 3,099 | 7,356 | 3,039 | 7,073 | 3,070 | 51,635 | 3,100 | 48,825 | .. | 2,810 |
| Trichinopoly .. | 25 | 15,342 | 26 | 14,957 | 3,217 | 9,253 | 3,048 | 9,747 | 3,242 | 24,595 | 3,074 | 24,704 | 109 | .. |
| Madura .. | 118 | 82,574 | 118 | 81,886 | 3,198 | 5,738 | 3,220 | 5,398 | 3,316 | 88,312 | 3,338 | 87,284 | .. | 1,028 |
| Tinnevelly .. | 82 | 55,784 | 109 | 54,854 | 1,906 | 5,159 | 1,851 | 4,463 | 1,988 | 60,943 | 1,960 | 59,317 | .. | 1,626 |
| Vernacular Training school. | .. | .. | .. | .. | 552 | 1,608 | 523 | 1,067 | 552 | 1,608 | 523 | 1,067 | .. | 541 |
| Total .. | 541 | 3,72,995 | 569 | 3,29,500 | 21,056 | 57,563 | 21,767 | 54,501 | 21,597 | 4,30,558 | 22,336 | 3,84,001 | .. | 46,557 |
| *Western Circle.* | | | | | | | | | | | | | | |
| Direction .. | 1 | 70 | 1 | 66 | 385 | 5,135 | 447 | 6,260 | 386 | 5,205 | 448 | 6,326 | 1,121 | .. |
| Mangalore, North. | 32 | 18,997 | 37 | 23,462 | 962 | 3,708 | 860 | 3,751 | 994 | 22,705 | 897 | 27,213 | 4,508 | .. |
| Do. South. | 24 | 8,052 | 23 | 8,017 | 1,112 | 4,316 | 1,146 | 4,061 | 1,136 | 12,368 | 1,169 | 12,078 | .. | 290 |
| Malabar, North | 74 | 40,960 | 78 | 47,560 | 4,548 | 6,420 | 4,226 | 5,081 | 4,622 | 47,380 | 4,304 | 52,641 | 5,261 | .. |
| Do. South. | 51 | 40,931 | 55 | 40,702 | 1,645 | 6,095 | 1,692 | 5,991 | 1,696 | 47,026 | 1,747 | 46,693 | .. | 333 |
| The Nilgiris .. | 68 | 39,826 | 71 | 45,785 | 1,902 | 14,299 | 2,337 | 11,979 | 1,970 | 54,125 | 2,408 | 57,764 | 3,639 | .. |
| Kollegal .. | 34 | 25,356 | 33 | 20,119 | 1,970 | 6,230 | †21,047 | 6,153 | 2,004 | 31,586 | 21,080 | 26,272 | .. | 5,314 |
| Coimbatore, North. | 78 | 65,819 | 78 | 72,548 | 3,394 | 12,112 | 3,134 | 10,972 | 3,472 | 77,931 | 3,212 | 83,520 | 5,589 | .. |
| Do. Central | 61 | 27,910 | 55 | 19,065 | 7,867 | 8,527 | 7,572 | 7,280 | 7,928 | 36,437 | 7,627 | 26,345 | .. | 10,092 |
| Do. South. | 69 | 34,856 | 71 | 39,568 | 2,523 | 9,992 | 2,212 | 10,123 | 2,592 | 44,848 | 2,283 | 49,691 | 4,843 | .. |
| Vernacular Training School. | .. | .. | .. | .. | 332 | 1,108 | 358 | 1,365 | 332 | 1,108 | 358 | 1,365 | 257 | .. |
| Working Plans Office. | .. | .. | .. | .. | 197 | 1,600 | 366 | 2,490 | 197 | 1,600 | 366 | 2,490 | 890 | .. |
| Total .. | 492 | 3,02,777 | 502 | 3,16,892 | 26,837 | 79,542 | 45,397 | 75,506 | 27,329 | 3,82,319 | 45,899 | 3,92,398 | 10,079 | .. |
| Grand total, Presidency. | 2,174 | 12,46,122 | 2,236 | 12,31,275 | 132,668 | 2,90,995 | 153,679 | 2,84,130 | 134,842 | 15,37,117 | 155,915 | 15,16,035 | .. | 21,082 |

* Correct figures furnished by the District Forest Officer, Gōdāvari Upper.

† Includes 19,200 bricks.

(a) Revised figure including accoutrements which were now added.

*Southern Circle.—N.B.*—Special Working Plans office has been excluded as it has been transferred to Western Circle.

(b) Excludes 656 articles belonging to the Parlākimedi Maliahs.

(c) ,, Rs. 1,293 being value of articles belonging to the Parlākimedi Maliahs.

(d) ,, 837 articles belonging to the Parlākimedi Maliahs.

(e) ,, Rs. 3,129 being value of articles belonging to the Parlākimedi Maliahs.

(f) ,, Rs. 1,836 against the year belonging to Parlakimedi Maliahs.

# Government of Madras

REVENUE DEPARTMENT

## G.O. No. 166, 10th January 1918

### Forest Administration Report

Reviewing the — for 1916-17.

READ—the following paper :—

**Proceedings of the Board of Revenue (Land Revenue), Forest No. 100, dated 21st November 1917.**

The Hon'ble Mr. M. E. COUCHMAN, I.C.S.,
Commissioner of Land Revenue and Forests.

The Board submits to Government its progress report of the forest administration of the Madras Presidency for the year ending 30th June 1917.

2. *Alteration in area.*—Some 8 square miles were constituted reserved forests and in pursuance of the policy recommended by the Forest Committee 44 square miles were disafforested during the year, the greater part of the latter area being in the districts of Bellary, the Nilgiris and Cuddāpah.

The total area of reserved forest was 18,810 square miles at the close of the year, a net decrease of 35 square miles on last year's figure. The area of reserved lands also fell, from 734 to 725 square miles. In the Parlākimedi Maliahs a block of about 13 square miles was added to reserved lands during the year. The total number of blocks selected for reservation in the Maliahs up to the end of the year was 25, aggregating 196 square miles.

3. *Forest settlement.*—As in previous years, forest settlement work was carried out by revenue divisional officers. Out of a total area of 493 square miles, which awaited settlement at the close of the year, the Northern Circle alone accounts for 422 square miles. Three large blocks covering an area of 418 square miles were awaiting settlement in the Gōdāvari district. The settlement papers in respect of two large blocks, viz., Nugur (246·61 square miles) and Peddamedisileru (96·48 square miles) are still undergoing revision at the hands of the local officers. It is reported that the final notification in respect of the remaining block, the Coringa extension reserve (75 square miles), will be ready for publication during 1917-18. The Chokkapad block in the Ganjām district (area 64·69 square miles), referred to in the last year's report, was notified under section 16 after the close of the year. As regards the Southern Circle, proposals for the employment of a Special Forest Settlement Officer and a special subordinate staff in connexion with the reservation of unreserved lands in the Attur taluk, Salem district, were submitted to Government for sanction (see Board's Reference No. 1750/16-4, dated 13th March 1917). Since then, however, the formation of an additional range staff has been sanctioned (G.O. No. 2770, Revenue, dated 6th September 1917) and it has been decided that this staff should take up the work. The special subordinate staff will therefore not be required. The appointment of a Special Forest Settlement Officer still awaits the orders of Government. The forest settlement work is practically complete in the Central and the Western Circles.

Excessive delays often occur in forest settlement proceedings and with a view to reducing them the Board now requires Collectors to submit a half-yearly return of the progress of these settlements.

4. *Demarcation.*—The total length of forest boundaries at the close of the year was 35,370 miles (or 235 miles less than in the previous year), of which 1,887 miles do not require artificial demarcation. The total length of artificially marked boundaries was 33,041 miles, of which 123 miles were demarcated for the first time during the year, against 118 miles in the previous year; four hundred and forty-two miles remained still to be demarcated at the close of the year, principally as in the

previous year, in the districts of *Kollegal* and *Madura*. The length of old boundaries repaired during the year was 18,808, against 17,644 miles in the previous year; of this length 12,259 miles were cleared by subordinates free of cost, against 11,438 miles in 1915–16. The average cost per mile of fresh demarcation and of repairs rose from Rs. 36–5–3 and Rs. 2–11–7 to Rs. 37–1–8 and Rs. 3–2–9. The increased cost occurred principally in the Western Circle and is attributed to the heaviness of the jungle cleared and to the increased cost of trenching in *North Malabar* and to the inaccessibility of the forests and the scarcity of labour in *The Nilgiris*. The question of the revised boundary between *the Nilgiri* and *Coimbatore* districts was finally decided in G.O. No. 2953, Revenue, dated 20th December 1916. The retention up to 15th November 1917 of the temporary surveyor who is employed on the demarcation of this boundary was sanctioned in G.O. Mis. No. 3250, Revenue, dated 13th October 1917. The special forest establishment, whose continued employment was sanctioned in G.O. No. 2038, Revenue, dated 26th September 1916, for the verification and demarcation of the boundaries of forest reserves in the *Nilgiri* district substantially repaired 124 miles which included 10 miles of the district boundary.

5. *Surveys.*—The Survey of India continued its operations in the *Nellore* district and surveyed about 115 square miles on the 4″ scale and about 65 square miles on the 2″ scale. A special surveyor deputed by the Survey of India completed the survey of some of the teak plantations in *South Malabar* and prepared maps for them on the 8″ scale. It is reported that the special district reference maps of the two *Malabar* divisions are pending publication in the Forest Map office, Dehra Dun, but that the maps of the red sanders areas in the *Cuddapah* district and the 'India' diagram showing annual revenue, expenditure and surplus for the ten years 1905–06 to 1914–15 were published during the year.

A surveyor deputed by the Madras Survey Party in March 1917 completed the survey of seven estates on the Anamalais; he had to stop further work in May owing to the outbreak of the monsoon. In its Reference Forest No. 2103-Gl./17–2, dated 29th October 1917, the Board has recommended to Government the employment of the surveyor for a period of six months from November 1917 in order to complete the survey of the remaining estates on the Anamalais. Miscellaneous work, such as the survey of coupes, the alignment of roads and fire lines, the verification of boundaries and preparation of coupe and working-plan maps, was done by departmental surveyors.

## Management of Forests.

### (1) *Regulation and Management.*

6. *Working-plans.*—Working-plans for an area of 494 square miles were sanctioned during the year and plans for 1,805 square miles were under preparation by District Forest Officers. The most important working-plans now under preparation are those for the sāl forests of Ganjām, the teak plantations of Nilambur and the Mount Stuart forests in the Anamalais. The original proposals for the sāl forests in *Ganjām* were modified at the suggestion of the Inspector-General of Forests, and the District Forest Officer visited the sāl forests near Dehra Dun and Gorakpur to study the effect of different methods of treatment. Observation areas have been laid out to note the effects of clear felling, sowing and improvement fellings of varying intensities. It is hoped that the final working-plan will be completed next year. At Nilambur, Mr. Bourne, the District Forest Officer, with a special staff continued to collect the statistics for the preparation of the final working-plans for the teak plantations. For Mount Stuart, a special staff has been engaged, first under Mr. C. C. Wilson, who has since joined the Indian Army Reserve of Officers, and then under the District Forest Officer Mr. H. F. A. Wood, in preparing a working-plan for the Tekkadi leased forests and the adjacent Ulandi forests. These are nearing completion. Other working-plans sanctioned during the year were the Hosūr sandalwood working-plan in *North Salem* and the revised working-plan for the fuel forests of *Madura*. There are still about 7,000 square miles of forests for which no working-plans have been prepared and many of the existing plans are either defective and require revision or are nearing the end of the period for which they were framed. An additional working-plans party has been sanctioned since the close of the year for the Southern Circle.

The department is already undermanned, and, in addition to this, several gazetted officers have been allowed to join the army, and the Indian Defence Force is making further claims on the time of most of the officers of the department; consequently satisfactory progress in this most important branch of work cannot be expected at present.

(2) *Communications and Buildings.*

7. Expenditure on buildings was restricted to absolutely essential requirements and showed a reduction from Rs. 1·32 lakhs to Rs. 1·02 lakhs. Expenditure on roads and bridges, being frequently remunerative and even more vital for the successful working of the department, rose from Rs. 1·08 lakhs to Rs. 1·62 lakhs. The chief works on which expenditure was incurred during the year were, under the head of *Buildings*, quarters and offices for subordinates; and under *Roads and Bridges*, an extension of the Mount Stuart tramway for 10 furlongs. The working of this tramway for the year showed a profit of Rs. 11,192 as compared with Rs. 1,441 in the previous year. In the *Nellore* district temporary tramlines were laid for the transport of fuel and poles from the casuarina topes and the Srīharikōta reserve. Three thousand seven hundred and sixty-five tons of fuel were transported from Srīharikōta and 1,045 from the casuarina topes, a considerable increase over the figures of last year, which were 1,518 and 927 tons respectively.

Satisfactory progress was made by the Forest Engineer on the important Alangayam-Komattiyur Ghat Road. The first section of five miles was completed and work on the other two sections well advanced. Rupees 47,457 were spent on this work. The alignment of the Nadanur-Amerdi Road was selected and the Forest Engineer completed this field work in connexion with the Tekkadi tram trace This trace has lately been inspected by the Forest Commissioner, and the Forest Engineer has been directed to prepare detailed estimates and plans. A practicable trace has been found by which it will be possible to transport timber from the forest to the Anamalai Road, where there will be a station on the proposed Dindigul-Palghat line, and the project is expected to be a remunerative one. The estimates will be submitted to Government with a report as soon as they are received. The Forest Engineer also revised plans and estimates for the Mount Stuart Ghat Road which have since been approved by Government. In all 403 miles of forest roads and bridle-paths were constructed during the year.

8. *Miscellaneous works.*—The expenditure under this head decreased from Rs. 12,279 to Rs. 7,876. The chief works consisted as usual in fencing compounds and reserves and constructing and repairing tanks and wells. In the Javadis an attempt was made to improve the water-supply by means of tube wells. The work was chiefly in the hands of the Agricultural Engineering department, and it is reported that little progress was made as owing to their dread of fever it was difficult to keep the subordinates on the hills.

(3) *Protection of Forests.*

9. The following table compares the forest offences reported during the year with those of 1915–16 and with the average of the three years ending with 1915–16 :—

| — | Injury to forest by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total. | | Average for three years ending 1915–16. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1915–16. | 1916–17. | 1915–16. | 1916–17. | 1915–16. | 1916–17. | 1915–16. | 1916–17. | 1915–16. | 1916–17. | |
| A. Cases taken to court .. | 92 | 50 | 5,033 | 4,275 | 2,052 | 1,596 | 341 | 296 | 7,518 | 6,217 | 6,762 |
| B. ,, compounded .. | 44 | 86 | 14,401 | 13,782 | 5,634 | 5,313 | 661 | 781 | 20,740 | 19,962 | 22,823 |
| C. ,, undetected .. | 1,609 | 1,217 | 504 | 419 | 505 | 257 | 9 | 15 | 2,627 | 1,908 | 2,149 |
| Total .. | 1,745 | 1,353 | 19,938 | 18,476 | 8,191 | 7,166 | 1,011 | 1,092 | 30,885 | 28,087 | 31,734 |

It will be seen that the total number of offences reported is 2,798 less than in the preceding year and 3,647 less than the average for the three preceding years. This satisfactory decrease of crime is attributed to better supervision, to the satisfactory working of the patrol system and to the extension of forest panchayats and

the kancha system. Petty offences in kancha areas are left to the kanchadars to deal with. In Kurnool, cattle or goats when found grazing without permits in class V reserves, were merely impounded and no further punishment was inflicted.

10. Compared with the figures of the previous year, offences appreciably decreased in the districts of *Kurnool South* and *West*, *Bellary*, *Nellore*, *North Arcot*, *South Arcot*, *Salem* and *Madura*. The Southern Circle contributed 44 per cent and the Central Circle 33 per cent of the total number. Crime was heaviest in the districts of *Guntūr*, *North Vellore*, *South Arcot*, *North Salem*, *Trichinopoly* and *Madura* which together return more than a third (40 per cent) of the total offences in the Presidency.

11. Of all reported cases the percentages that were taken to court, compounded and undetected were 22·13, 71·08 and 6·79, respectively, against 24·34, 67·15 and 8·51 in the previous year. The total number of cases disposed of by Magistrates fell from 8,061 to 7,438. Of these 6,989, or nearly 94 per cent, ended in conviction; the corresponding figure for last year was 92·8. The punishments inflicted by the Magistrates were generally adequate except in *Kistna* and in several districts in the Central Circle especially *Chittoor*.

12. More than half the cases were compounded and the compensation fees realized amounted to Rs 1,76,368. The average fee per case was Rs. 9–7–8 against Rs. 9–13–6 in the previous year.

13. The rules laid down by Government in G.Os. No. 1990, Revenue, dated 13th July 1910, and No. 5958, Revenue, dated 14th December 1910, for the guidance of forest officers in compounding offences are reported to have been generally observed.

14. Rewards amounting to Rs. 772 were granted to informers and forest subordinates against Rs. 903 in the previous year. The Khonds in *Ganjām* were rewarded with rice and plough bulls in return for assistance rendered in the detection of forest offences. The Koyas and Reddis were given money rewards for similar services. Small rewards were given in several districts in the Southern Circle, but it is reported that on the whole the power of granting rewards was used sparingly.

15. *Fire protection.*—The season was favourable for protection against fires and there was a decrease in the number of offences and in the area burnt. Instances of deliberate incendiarism occurred in the *Anantapur* and *Cuddapah* districts, and in some cases reserves were closed to grazing, grazing fees enhanced and the privilege of free removal of grass withdrawn. Similar penal measures are reported to have had a beneficial effect in the *North Coimbatore* division. The area over which special protection was attempted was 7,213 square miles, of which 861 square miles were burnt, a percentage of failure of 11·9 as compared with 17 of last year. The cost of successful protection per square mile was Rs. 18–4–8, against Rs. 20–12–7 in the previous year.

The forest village system in the Javadis, under which the villages are granted various privileges, including free grazing, in return for the protection of the forests, was further developed and worked well during the year and this system will be extended to other areas as opportunity offers. In *Kurnool* the Chenchus were successfully employed on fire protection and in *Gōdāvari* and *Coimbatore* the co-operation of the hillmen was secured in preventing fires.

In addition to the areas specially protected the ordinary staff attempted to protect 8,748 square miles against 9,309 square miles in the previous year. Of this area 8,404 square miles were successfully protected.

16. *Protection from cattle.*—In all new working-plans special attention is being paid to the question of grazing, with a view to minimizing hardship to the ryots, while improving the grazing and protecting the forests from the damage done by overgrazing. The kancha system in *Nellore* continued to develop, and a Special Deputy Collector, M.R.Ry. A. Ramanuja Achariyar, was again placed on special duty for three months to popularize the system and encourage its growth. The late Mr. M. F. Arbuthnot, whose death on 26th May 1917 is a heavy loss to the department, deserves much of the credit for the development of kanchas in *Nellore*. Attempts are being made to introduce the system into the adjacent district of *Chingleput*. When statistics of cattle and the 'grazeable' areas are carefully examined, it is

usually found that the area available for each head of cattle is quite insufficient to maintain them in condition. A restriction in the number of cattle grazing in the reserves is essential as pointed out in paragraph 5 of G.O. No. 246, Revenue, dated 26th January 1917. The best method of effecting this in each locality is receiving careful consideration; but in view of the past history of the subject many years must elapse before the problem is solved. The forest panchayats, the kanchas of *Nellore* and the forest village system will all relieve the situation when they are practicable and a gradual enhancement of the present nominal grazing fees coupled with more effective supervision should, in time, reduce the excessive number of useless animals now kept by the villagers. The fees charged by Government are considerably lower than those charged by private individuals for grazing. In a forest reserve in *Guntūr* which was sub-leased by a private individual a fee of one rupee per month per cow was demanded and was paid without demur. The fees charged by Government run from 4 annas to 12 annas per annum. It is reported that steps have been taken in several districts in the Southern Circle to formulate grazing schemes, which it is hoped will after a time reduce the very large incidence which is now prevailing. In the meantime efforts are being made to diminish the friction between the department and the people, as will be seen from the fact that the number of cattle impounded during the year showed a decrease of 32,641 compared with the previous year.

17. The total number of animals licensed to graze on payment fell from 3,875,000 to 2,704,959. The Central and Southern Circles contributed to the decrease, the main cause of which was the transfer of a number of reserves to panchayat management.

18. *Protection against injuries from natural causes.*—Spike continued its attacks upon sandal in *North Salem*, *Trichinopoly*, *Kollegal* and *North Coimbatore*. Mr. Hearsey, Extra Assistant Conservator of Forests, continued his investigation into the insects usually found on sandal with a view to seeing if this would throw any light on the manner in which the spike disease is propagated. Doctor Coleman of Mysore has been asked to report on his work. Good progress has been made in the eradication of lantana in the areas under working-plans in *North Malabar* and in three divisions in *Coimbatore*. Under the orders of Government (No. 987, Revenue, dated 3rd April 1917) Mr. T. A. Whitehead, Deputy Conservator of Forests, was deputed to report on Mr. Tireman's scheme for the eradication of lantana in Coorg. Mr. Whitehead's report on the subject was circulated to all Conservators of Forests and District Forest Officers for information. Hybloea were noticed in the teak plantations of the Nilambur range and generally in the Amarampalam range, but owing to the heavy rains of October and November last little damage was done. Loranthus in the *Hardwickia binata* forests of the Yerramalais in *West Kurnool* division is reported to be a serious and increasing pest and no measures have yet been devised to combat this evil, the lopping of branches affording only a temporary relief. The *South Arcot* district was the centre of the very violent cyclone which occurred on the 22nd November last and uprooted a large number of trees in the reserves. Far greater damage was done to the forests of *South* and *West Vellore* forest divisions, where sandal and other trees were uprooted by thousands.

### *Sylviculture.*

19. *Natural reproduction.*—Owing to a favourable season, assisted in some parts by the seeding of bamboos, natural reproduction was satisfactory, especially in the case of sāl in *Ganjām* and *Hardwickia binata* in *Kurnool*, *Bellary* and *Guntūr*. In *Cuddapah* red sanders coppiced well and reproduction in *Chittoor* was satisfactory. Sandal reproduction was good throughout the chief sandalwood areas. Favoured by bamboo seeding, hopea reproduction in *South Kanara* was good.

20. In *Kurnool*, the teak plantations established for the purpose of providing labour for the Chenchus were maintained and an additional area of 45 acres was planted. Small additions were made to the teak plantations in *South Malabar*. In many cases improvement fellings and tending operations were carried on in accordance with the working-plans. Cultural operations were carried on over a total area of 11,093 acres, compared with 2,376 acres in the previous year, and regular planting was done in one hundred acres at a cost of Rs. 5,411.

21. The Board is considering the question whether more planting should not be undertaken by the department, care being taken to avoid the waste of money which undoubtedly occurred in the past by concentrating effort on favourable localities and insisting on a proper continuity of policy. The Nilambur plantations show what can be done when these conditions are fulfilled.

22. *Operations for the improvement of growing stock.*—The operations undertaken during the year consisted, as in previous years, of improvement fellings, thinnings, fencing, creeper-cutting, the removal of inferior species, dead and dying trees, parasites and noxious growth and weeds, the building of stone walls in a few places to protect the forests from fire and the bunding of streams. A considerable amount was spent on thinnings in the Nilambur teak plantations, according to programme, and light improvement fellings in favour of hopea were carried out over considerable areas in the North and South Mangalore forest divisions.

(5) *Exploitation.*

23. *System of management—Major produce.*—The various methods of exploitation of major produce were, as in previous years, clear or regeneration fellings, thinnings, selection fellings and improvement fellings and coppice fellings. Clear or regeneration fellings were carried out in *Ganjām*, *Kurnool West*, *South Arcot*, *Trichinopoly* and *South Malabar*. Thinnings were carried out in *Gōdāvari Lower* only and selection fellings were made, as usual, in timber coupes or where it was found necessary to eliminate dead and unsound trees. Improvement and coppice fellings were undertaken principally in fuel coupes and in a few timber coupes and bamboo areas. Unregulated fellings under the permit system were confined to Rampa in *Lower Gōdāvari* and to some unreserved lands under the control of the Revenue Department. In reserves this antiquated system was applied only to the extraction of small timber and fuel in The Nilgiris.

24. *Minor produce and fodder grass.*—Minor produce was generally leased out. Bamboos were removed on permits in six divisions in the Western Circle to meet local demand and for use in floating timber. The manufacture of catechu in *North Mangalore* and the collection of miscellaneous produce in *Kurnool West*, in parts of *Nellore*, *The Nilgiris* and *South Coimbatore* were carried out by departmental agency. Permits were issued in several districts for the removal of manure leaves, stone and gravel, etc. In the *Kurnools*, the Chenchus were employed on the collection of minor forest produce and bamboos and bamboo splits from areas not leased out. In *Ganjām* the enjoyment of fruit trees was generally left to the Khonds. The right to collect cassia barks (*Cassia auriculata* and *fistula*) was leased out, except in *Gōdāvari Upper* and in parts of *Kurnool East* where the collection was made by the Chenchu agency. In the Central and Southern Circles *Cassia fistula* (rela bark) was leased out for the first time in all districts. Fodder grass was leased out in *Gōdāvari Lower*, *Kistna* and in parts of *Central Coimbatore*, and removed on permits in *Madura*, in the Beypore tope in *South Malabar*, *The Nilgiris*, parts of *Central Coimbatore* and in the other divisions of *Coimbatore*. In *Tinnevelly* grass was as usual included in minor produce leases. Ryots were allowed to cut and remove grass from reserves in all districts, except in parts of *North Cuddapah*, *Anantapur* and *Nellore*, where the privilege was withdrawn because the villagers had failed to assist in putting out fires, in *South Salem*, *Trichinopoly* and in three divisions of *Coimbatore* and *Malabar* where there was no demand. In *North Coimbatore* the concession was allowed on the understanding that the privilege would be withdrawn on the occurrence of fires. The free removal of thatching grass was allowed in the two *Mangalore* divisions and parts of *The Nilgiris*. In *Bellary* 860 tons of hay were cut on contract, against 450 tons in the previous year. The Military Department held leases of areas in *Bellary*, *Anuntapur*, *West Cuddapah* and *North Vellore* at Rs. 2 per ton of hay removed.

25. *Hay-making.*—No hay-making operations were undertaken by the department during the year.

26. *Grazing.*—The revenue from grazing and fodder grass, Rs. 7,03,869, was higher than in the previous year by Rs. 17,298. The increase in the Western Circle (by Rs. 21,251) was chiefly in *North Coimbatore*, where the fees were doubled as a punitive measure for incendiarism. This was counterbalanced by a decrease in the

Central Circle, where it was due chiefly in *Bellary* to the handing over of class V reserves to forest panchayats and in *Guntūr* to the exclusion of goats from all reserves and sheep from certain reserves.

27. *Agency of exploitation.*—The subjoined statement compares the outturn through all the agencies of timber, fuel, bamboos and minor produce with that of the preceding year:—

| Agency of exploitation. | | Timber including sandalwood (in thousands of cubic feet). | | Fuel (in thousands of cubic feet). | | Bamboos (value in rupees). | | Minor produce including grass and grazing (value in rupees). | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. | 1915-16. | 1916-17. |
| By Government agency. | Northern Circle .. | 271 | 125 | 649 | 260 | 4,523 | 2,659 | 8,314 | 5,340 |
| | Central Circle .. .. | 20 | 11 | 24 | 56 | 13 | 75 | 8,487 | 12,575 |
| | Southern Circle .. | 17 | 25 | 71 | 38 | 289 | 640 | 533 | 1,402 |
| | Western Circle .. | 309 | 383 | 621 | 661 | 5,772 | 4,896 | 20,518 | 13,451 |
| | Total .. | 617 | 544 | 1,365 | 1,015 | 10,597 | 8,270 | 37,852 | 32,768 |
| By purchasers. | Northern Circle .. | 907 | 914 | 4,075 | 4,365 | 1,41,664 | 1,45,301 | 2,74,819 | 2,75,990 |
| | Central Circle .. .. | 931 | 827 | 6,388 | 6,860 | 17,301 | 24,812 | 7,63,601 | 9,61,649 |
| | Southern Circle .. | 798 | 828 | 4,239 | 4,770 | 1,10,692 | 1,20,968 | 3,76,879 | 3,76,314 |
| | Western Circle .. .. | 379 | 928 | 3,219 | 3,480 | 35,841 | 41,275 | 1,37,368 | 1,58,057 |
| | Total .. | 3,015 | 3,497 | 17,921 | 19,475 | 3,05,498 | 3,31,856 | 15,52,067 | 17,72,001 |
| By right holders. | Northern Circle .. | 167 | 58 | 582 | 582 | 407 | 439 | 23,869 | 25,990 |
| | Central Circle .. .. | .. | .. | .. | .. | 167 | .. | 138 | 127 |
| | Southern Circle .. | .. | .. | .. | .. | .. | .. | 1,115 | 1,051 |
| | Western Circle .. .. | 16 | 23 | .. | .. | .. | .. | .. | .. |
| | Total .. | 183 | 81 | 582 | 582 | 574 | 439 | 25,122 | 27,168 |
| By free grantees. | Northern Circle .. | 47 | 77 | 3 | 3 | 278 | 1,765 | 119 | 4,434 |
| | Central Circle .. .. | 48 | 59 | .. | .. | .. | 77 | 313 | 741 |
| | Southern Circle .. | 19 | 38 | 3 | 4 | 454 | 480 | 5,819 | 3,324 |
| | Western Circle .. .. | 4 | 4 | 1 | .. | 88 | 36 | 915 | 1,144 |
| | Total .. | 118 | 178 | 7 | 7 | 820 | 2,358 | 7,166 | 9,643 |
| | Grand total .. | 3,933 | 4,300 | 19,875 | 21,079 | 3,17,489 | 3,42,923 | 16,22,207 | 18,41,580 |

28. The quantity of timber and fuel and the value of bamboos extracted by departmental agency decreased, mainly in the Northern Circle, and is attributed to the extension of the contract system of working. This explanation does not seem to be quite convincing, as the quantity of removals by purchasers under these heads in the Northern Circle does not show any corresponding increase.

The quantity of timber removed by purchasers increased *slightly* in the Southern Circle and *largely* (by 245 per cent) in the Western Circle. The increase in the last-named circle was chiefly due to extensive sales of tree growth on darkhast lands, especially in *Mangalore North*. There was, however, a decrease in the Central Circle; it is attributed to a fall in darkhast applications and to the fact that smaller quantities were extracted from improvement coupes in *West Cuddapah*. The quantity of fuel removed by purchasers increased in all the circles. Among the districts of the Northern Circle, it was due in *Gōdāvari Lower* to removals for munition purposes, in *Kistna* to the sale of three reserves and in *South Kurnool* to the sale of a larger number of fuel coupes than usual. In the Central Circle, the increase was due in *Bellary* to the sale of a larger number of fuel coupes and of more fuel in unreserved lands, in *West Cuddapah* to the greater quantity of fuel obtained from coupes leased out, and in *Chingleput* to the sale of withered and windblown trees. In the Southern Circle, the increase is attributed in *North Arcot* to the sale of a large number of trees blown down by the cyclone in November 1916, in *South Arcot* to the increased coupe sales and the sale of entire growth in reserves, and in *Tinnevelly* to an increased demand for firewood. In the Western Circle, the increase is attributed to extensive sales of tree growth, chiefly in *Mangalore North*.

29. The value of bamboos removed by purchasers increased in all the circles.

30. The value of minor produce extracted by departmental agency decreased in the Western and Northern Circles. The decrease was due in the former circle to a fall in the demand for bluegum leaves in *The Nilgiris* on the part of the Railway

authorities and to the extension of the lease system; in the Northern Circle the fall was due in *Kistna* to the disafforestation of the Karukollu reserve from which Divi Divi pods used to be collected departmentally, in *Kurnool East* it was due to the failure of the crop of soap nuts and in *Kurnool South* to the extension of the lease system. The increase which occurred in the Central Circle is attributed to a favourable season.

The value of minor produce removed by purchasers increased in all the circles except the Southern. In the Central Circle the rise was due to the sale of *Cassia fistula* bark and to the better prices obtained for tangedu leases in general. The increase of about Rs. 20,000 in the Western Circle is attributed to increased grazing receipts realized in *North Coimbatore*, where the grazing fees were doubled as a punitive measure for incendiarism. The variations in the other circles are small and call for no remarks.

31. The estimated value of forest produce removed by right-holders was Rupees 55,684 against Rs. 41,872, and of produce granted free and at reduced rate, Rs. 47,766 against Rs. 22,240. The increase in the value of forest produce removed by right-holders occurred chiefly in the Western Circle and was due in the *Mangalore* divisions to the removal on a larger scale than usual of reserved trees from kumaki lands and to the reduction from six feet to four of the minimum girth prescribed in the case of trees removed from such lands; in *South Malabar* the increase resulted from the grant of timber to the Uralan of the Tirukkaliyur devasam for repairs to a temple in accordance with the terms of the lease granted by him. The increase in the value of free grants occurred chiefly in the Northern and Southern Circles and was due to the large applications for rebuilding houses and huts damaged or destroyed by the floods in *Kistna* and *Kurnool* in October and November 1916 and by the severe cyclone of November 1916 in *South Arcot* district.

32. *Financial results.*—The following statement exhibits the financial results of the year as compared with that of the previous year and with the average of the preceding five years :—

| Years. | Revenue. | Expenditure. | | Total. | Surplus. |
|---|---|---|---|---|---|
| | | A. Conservancy and works. | B. Establishments. | | |
| | Rs. | Rs. | Rs. | Rs. | Rs. |
| 1916-1917 .. .. .. .. .. | 47,79,016 | 11,88,726 | 15,95,648 | 27,84,374 | 19,94,642 |
| 1915-1916 .. .. .. .. .. | 39,38,475 | 10,97,505 | 15,10,444 | 26,07,949 | 13,30,526 |
| Average for the five years ending 1915-16. | 40,72,347 | 14,75,520 | 14,99,308 | 29,74,828 | 10,97,519 |

The gross revenue was Rs. 47·79 lakhs and the expenditure Rs. 27·84 lakhs, leaving a net surplus of Rs. 19·95 lakhs, the highest yet recorded. This surplus was distributed over all the circles and was higher than that of the previous year by Rs. 6·64 lakhs. The Central Circle stands first, with a surplus of Rs. 8·28 lakhs and the Southern next with Rs. 7·66 lakhs against a surplus of Rs. 6·04 lakhs and of Rs. 4·61 lakhs respectively for the previous year. The Northern and the Western Circles show a similar surplus of Rs. 1·69 lakhs and Rs. 2·32 lakhs against Rs. ·73 lakh and Rs. 1·93 lakhs of the previous year.

This result is partly due to rigid economy and the postponement of necessary expenditure owing to the war and also to an increase in the revenue from sandalwood, to the leases of *Cassia auriculata* and *Cassia fistula* which had not been sold for five years and also to the sale of reserved forests which had been given up. The expenditure on 'A. Conservancy and Works' increased from Rs. 10·98 lakhs to Rs. 11·89 lakhs and that on 'B. Establishments' by Rs. ·85 lakh. As soon as favourable conditions return, a much larger expenditure will be necessary under both these heads.

33. *Research and experiments.*—The most important research work carried out during the year was in connexion with sandalwood which forms so important an item of revenue in the Southern and Western Circles. As already stated in paragraph 18 supra Mr. Hearsey, Extra Assistant Conservator of Forests, continued his investigation into the pests to which sandal is usually liable. Experiments were carried out during the year with red-sanders wood, under the guidance of Mr. E. Marsden, the

Imperial Sylviculturist, who visited the *South Cuddapah* division. Mr. Marsden laid out three sets of sample and experimental plots to determine the girth increment and development of heavily thinned red-sanders plantations and the condition best suited for the natural regeneration of the species. The Conservator, Central Circle, will be requested to report the result of these experiments. Experiments were carried out with the same timber by the Director of Industries, United Provinces, with a view to determining the existence of the dye known as 'santalin.' The experiments were, however, not successful as it was found that though the wood was of good quality, its utility was limited, the dye principle being insoluble in water and giving dull red to brown shades. Two varieties of myrobolams were sent from certain reserves in the *Chingleput* district to the Forest Economist, Dehra Dun, so that their tannin properties might be tested. Their quality is reported to be of the poorest. The tannin properties of the barks of the Australian wattles known as *Acacia decurrens* and *Acacia dealbata* in *The Nilgiri* plateau have been tested and while the former, which is scarce, is acknowledged to be a valuable tanning agent, the *dealbata* which is found in abundance on the hills, was found to be comparatively useless. The Conservator, Western Circle, expresses the hope that this variety perhaps awaits the discovery of the proper method of using it. The Euphorbia wood of the Paranur reserved forest in the *Chingleput* district was tested by the Director of Industries, Madras, to determine its utility for paper manufacture. The Conservator will be requested to report in due course the result of this experiment. In connexion with Messrs. Nelson & Co.'s scheme for the establishment of a bamboo pulp factory on the West Coast, the Conservator, Western Circle, has recently furnished to the Board a revised estimate of the cost of delivering bamboos. He reports that the results are favourable to the project, which, it is hoped, will be revived after the war. Thinnings of bamboo clumps are being conducted in certain reserves in various divisions of the Southern Circle. The Conservator, Southern Circle, states that, though it was first thought that the results would be harmful, more recent observations tend to show that the number of new culms produced on the thinned clumps is larger than those on the unthinned and that working becomes much easier. The result of the examination and analysis at Dehra Dun of sandalwood from South Kanara has confirmed the previous dictum that this wood is much the richest in oil in the market. The experiment of destroying creepers by painting with lime has not produced appreciable results either in the Northern or Western Circle, but is being continued with the addition of sulphur, in one or two places in the former circle. The experiment of inoculating *Butea frondosa* and *Zizyphus xylopyra* with lac culture was continued in the *West Kurnool* division and promises to be successful. Experiments are being made in *Ganjām* to see whether sal can be used for cask staves.

34. *Administration.*—The Hon'ble Mr. H. F. W. Gillman, I.C.S., was head of the forest administration from 1st July to 30th September 1916 and the Hon'ble Mr. M. E. Couchman for the rest of the year. The Hon'ble Mr. Gillman toured in the districts of *Salem*, *Coimbatore*, and *The Nilgiris* and the Hon'ble Mr. Couchman in the districts of *Coimbatore*, *Bellary*, *Kurnool*, *Cuddapah*, *Ramnad*, *Nellore*, *Chingleput*, *Guntūr*, *Malabar* and *North Arcot*. Mr. Gillman's inspection of *Salem* was in connexion with the reservation of the Attur unreserves. Mr. Couchman's visit to *Coimbatore* in October 1916 was made in connexion with the sale of elephants at Walayar, which was attended by His Excellency the Governor. In *Bellary* questions connected with the formation of panchayats claimed his attention, and in *Nellore* he went into the methods of collecting tanning barks and the working of the kancha system of grazing. In *North Arcot* he discussed with the local officers the subject of the assignment of land in the Yalagiris to the Malayalis. At Calicut the Forest Commissioner inspected and prepared a short note on the Temporary Assistant's work in connexion with the seasoning of such of the indigenous soft woods as might take the place of the imported deals. A copy of the Forest Commissioner's inspection note of the forests in the Ramnad district has already been submitted to Government.

35. Messrs. H. B. Bryant and P. M. Lushington were in charge of the Central and the Southern Circles throughout the year. Mr. F. L. C. Cowley-Brown was in charge of the Northern Circle until the 4th November 1916, when he had to take leave on account of ill-health. He was succeeded by Mr. H. A. Latham, who held charge of the circle for the rest of the year. The charge of the Western Circle was

held by Mr. H. A. Latham up to 27th October 1916 and by Mr. C. D. McCarthy for the rest of the year. The Conservators inspected all the District Forest offices, except those of *Cuddapah*, *Chittoor*, *Madura*, *Trichinopoly* and *Kollegal*. The Conservators also recorded inspection notes of the forests visited by them in the districts of *Bellary*, *Chittoor*, *North and South Vellore*, *South Salem* and *Trichinopoly*. The Conservator, Western Circle, inspected the forests of *North Mangalore*, *North and Central Coimbatore* and parts of *The Nilgiris* and *South Coimbatore* but has so far submitted no inspection notes. He has been requested to do so. All District Forest officers, except the District Forest Officer of *South Malabar* spent a sufficient number of days in touring and the short touring of the excepted officer has been satisfactorily explained. All Range offices, except two in each of the divisions of *Upper Gōdāvari* and *Central Coimbatore* and one in each of the divisions of *West Kurnool*, *South and West Cuddapah*, *Nellore*, *North Salem*, *Trichinopoly* and *South Coimbatore*, were inspected by the District Forest officers. The accounts of District Forest offices, except those of *South Arcot*, were inspected by the auditors of the Accountant-General's office and the results were reported to be generally satisfactory. In addition the accounts of five forest divisions in the Western Circle were inspected by the Assistant Accountant-General with equally satisfactory results.

36. The position of the District Forest Officer as the head of his department in the district was defined in G.O. No. 2732, Revenue, dated 2nd December 1916. The consequential amendments to the Forest Code, including the appointment and control of the clerks in the District Forest office, are now under the consideration of Government.

37. All the forests of the Presidency have now been classified in accordance with the recommendations of the Forest Committee. There has been a satisfactory increase in the number of panchayats, which now number 290 as compared with 147 last year. The area under management is now about 479 square miles of reserved forests and unreserved lands which have been declared reserved lands for purposes of panchayat management compared with 219 square miles last year. The panchayats are reported to have worked well on the whole. The chief irregularities reported were overgrazing, browsing by goats, illicit felling of trees and removal of leaves for manure. Only three panchayats are reported to have been dissolved and the area under their management resumed on account of misconduct.

38. During the year Mr. L. Saunders, Assistant Superintendent of Police, was appointed 'Special Chenchu Officer' in the Kurnool district. His duties are to gain the confidence of the Chenchus, secure suitable employment for them, and prevent crime. Hitherto the Forest Department has found employment for the members of this tribe but it is reported that there is not much scope for the extension of the teak plantations. It is therefore hoped to induce them to take to settled cultivation. Land has been set apart for them near various villages, and it is proposed to buy ploughing cattle for them. In *East Kurnool* the District Forest Officer Mr. Madan has taught them how to make bamboo splits. It is proposed to introduce this into the more troublesome gudems of West Kurnool and thus provide them with steady work for a good part of the year. Since the Chenchus have been getting good pay from the Forest Department, it is reported that they have changed their diet, which used to consist chiefly of wild roots, and now eat ordinary food-grains. This change of taste should form an inducement to them to settle down on the land and cultivate it.

In future any rewards paid to them will be for general good behaviour, and the policy of giving them daily wages for putting out fires which in most cases they have lighted themselves, will be abandoned. Mr. Saunders was only in charge for a few months of the year under report, but his services were often requisitioned to stop drunken brawls among the Chenchus and no serious crime occurred.

39. Mr. A. W. Lushington, C.I.E., retired Conservator of Forests, was employed as Special Assistant to the Forest Commissioner to investigate the possibility of more commercial exploitation of the forests. He entered on his duties in December 1916 and has been working mainly in the Western Circle, conducting seasoning experiments with various timbers and preparing a scheme for the exploitation of the West Coast forests, which contain large quantities of soft woods, at present almost unknown to the market.

It is clear that as soon as conditions permit much more direct exploitation will have to be undertaken by Government. Private firms are not willing to invest large sums of money in the tramways, sawmills and other plant, and without these the more remote forests will remain unexploited. Little, however, can be attempted till the staff of the department has been strengthened, as the present staff is insufficient for the present lines of work. This is engaging the attention of Government.

40. A new departure was made in the transfer of the Revenue administration of the hill villages in the Javadis to the Forest Department. These villages are more frequently visited by the Forest officers than by the Revenue Divisional officers and the forest revenue is far greater than the land revenue. It is hoped that the change will be beneficial both to the people and the Forest Department.

41. During the year proposals were submitted to Government for the reorganization of the subordinate staff of the department, of the inadequacy of which the Government are aware. The division of *Cuddapah* into three charges (sanctioned in G.O. No. 214, Revenue, dated 25th January 1917), was given effect to from 1st April 1917, and the division of *North Arcot* into three forest charges (sanctioned in G.O. No. 53, Revenue, dated 8th January 1917) was also given effect to from the same date. The proposal to form a fourth division in the *Kurnool* district was abandoned and the Collector has been requested to formulate proposals for the formation of a subdivision instead. During the year the Board has approved of the proposal of the Conservator, Southern Circle, to abolish the *Trichinopoly* forest charge and to form a new forest charge in *Salem* as soon as the District Forest Officer divests himself of the charge of the plain forests.

42. The work of the superior officers of the department has been generally satisfactory. By the sudden death of Mr. H. F. Arbuthnot, District Forest Officer, Nellore, the department has lost a very energetic and conscientious officer. The success of the 'kancha' grazing system in *Nellore* is largely due to his enthusiasm and untiring exertions.

M.R.Ry. Rao Sahib K. Gundu Rao, Forest Assistant to the Board of Revenue and a faithful servant of Government, died in September while on leave.

43. *The Forest College, Coimbatore.*—The college continued to work satisfactorily. Out of the 29 students who appeared for the final examination one, a Government student, won the honours certificate and carried away most of the prizes. Nineteen obtained the higher standard certificates and eight the lower standard, and only one failed to qualify for any certificate. The final examinations in all the subjects were conducted by examiners from outside the staff of the college. The examiners' remarks go to show that a good deal of attention was paid to practical training, but that some of the students were lacking in the power of expression. The examiners have suggested modifications in certain directions and the Principal will give effect to them as far as practicable.

The 1916–18 division started in August 1916 with 34 students. The Conservators showed discretion in their selection of candidates and, in the light of the instructions given last year, the Principal weeded out seven candidates who were found unfit to continue under training. There thus remained 27 in residence at the close of the year.

The Gass Forest Museum attached to the college continued to attract a large number of visitors. The members of the Industrial Commission while at Coimbatore visited it.

44. *General rules under the Forest Act.*—The working of the timber and sandalwood transit rules was satisfactory. The Conservator, Central Circle, considers that the extension of the rules to all districts in the circle is desirable if an efficient check over the removals of forest produce is to be rendered possible. The Conservator, Southern Circle, also considers that the introduction of such rules in some districts is necessary to check the smuggling of sandalwood. The people generally availed themselves of the privileges allowed by the rules under section 26 of the Forest Act and there were no complaints of any importance, except from the Attur range of the *South Salem* division, where large quantities of fuel were being smuggled in from the Paithur unreserves.

45. *Improvement of water-supply in Government grazing grounds (G.O. No. 1622, Revenue, dated 4th June 1914).*—In the Northern Circle two tanks were repaired and a well was sunk in *Lower Gōdāvari*. In other districts no such works were carried out, chiefly on account of financial restrictions. In the Central Circle the existing wells were repaired and improved in *Anantapur*, *Guntūr* and *Nellore*. In *Chingleput*, a philanthropic ryot was permitted to repair a tank in the Kattugudalur reserve. In the Southern Circle the bunding of streams in three reserves in *North Vellore* was carried out. Similar work was entrusted to the Malayalis of the Chitteris in *South Salem* who were given a lump sum for the bunding of the main streams in those hills. Tanks were repaired in *South Arcot* and *Trichinopoly* and the water-supply of a reserve in *Madura* improved. No measures in this direction were considered necessary in the West Coast districts, in the *Nilgiris* and *Central Coimbatore*, except in *Kollegal* and *North Coimbatore*, where for want of funds nothing was done, and in *South Coimbatore*, where the grazing question still remains unsettled.

46. *Opening of small coupes in the vicinity of villages for rural supply—paragraph 20 of the orders of Government on the Forest Committee's report.*—The Conservator, Northern Circle, reports that coupes in convenient localities were sold to contractors to meet the wants of the people. In the Central Circle, coupes were opened wherever there was a local demand. In the Southern Circle, sale of coupes at the edge of forests was attended to by coupe contractors. In the Western Circle, no such measures were considered necessary as the demand for fuel was met from coupes sold to contractors and other sources.

47. *Patrol system—paragraph 22 (1) of the Government Order on the Forest Committee's report.*—In the Northern Circle, the patrol system has been introduced in all districts except in *Upper Gōdāvari* and its working is reported to be satisfactory except in *Gōdāvari Lower* and *Kistna*. In *Kurnool West*, the system is reported to have been exceptionally successful. In the Central Circle, the system is in vogue in the three Cuddapah divisions only and the working there is reported to be satisfactory. The system introduced in *Bellary* last year was abandoned as it proved unsuitable. In the Southern Circle, the system was continued in *North Vellore*, *South Arcot*, *South Salem* and in one range in *Trichinopoly*, but the smallness of the establishment prevents it becoming a real success. In the Western Circle the system which was introduced last year in one of the ranges in *Central Coimbatore* is reported to have been a success and to have resulted in the better protection of forests. It is not required in *Malabar* or in the two ranges of *South Coimbatore* and was not introduced in other divisions owing to the inadequacy of establishment. The Board looks forward to better success in the working of the system when its proposals for the reorganization of the subordinate staff are sanctioned and brought into force.

48. *Forest Conference.*—A conference was held by the Forest Commissioner with the Conservators of Forests in February 1917 and various forest matters were discussed.

(True extract)

H. R. PATE,
*Secretary.*

To the Secretary to Government, Revenue Department, with appendices.

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**Order—No. 166, Revenue, dated 10th January 1918.**

Recorded.

Forest No. 3.

2. *Paragraph 3 of the Board's Resolution.*—The appointment of a Special Forest Settlement officer for the reservation of unreserved lands in the Attur taluk of the Salem district is held in abeyance on account of the paucity of officers available for the work.

3. *Paragraph 7 of the Board's Resolution.*—Estimates and plans for the construction of the Nadanur-Amerdi road have been received and are under the scrutiny of Government.

4. *Paragraphs 9 to 16 of the Board's Resolution.*—The Government note with pleasure that the number of forest offences has decreased and that the extension of forest panchayats and the kancha system contributed to this reduction. The large decrease in the number of cattle impounded is very satisfactory.

5. *Paragraph 37 of the Board's Resolution.*—The number of forest panchayats has increased from 147 to 290 and the area under their management from 210 to 479 square miles. The classification of forests has been completed and the panchayats are reported to have worked well on the whole. It has been represented to Government that it is desirable to give forest panchayats a legal status and to empower village panchayats to try petty forest offences. The Board of Revenue is requested to consider and report on these points when submitting its report on the working of the forest panchayats for 1916–17.

6. *Paragraph 39 of the Board's Resolution.*—Pending the development of a Forest Engineering staff, Government propose to depute an experienced Forest officer to Canada to study modern methods of timber extraction and transport with a view to their application to the problems of this Presidency.

7. *Paragraph 41 of the Board's Resolution.*—The sanction of the Secretary of State has been received for the creation of the post of Chief Conservator of Forests in this Presidency and for the addition of nine other posts to the Imperial and ten to the Provincial cadres. The sanction is to be given effect to as funds permit and as recruits become available. The proposals for the reorganization of the subordinate staff are under the consideration of Government.

8. The Government note with satisfaction the Board's testimony to the work done by the superior officers. They record with regret the death of Mr. H. F. Arbuthnot and M.R.Ry. Rao Sahib K. Gundu Rao Avargal.

9. The Board's report which was due to Government by 15th November 1917 was not received in a complete form till 13th December 1917.

(True extract)

A. R. KNAPP,
*Acting Secretary to Government.*

To the Board of Revenue (Land Revenue, Forest).
" Accountant-General.
" Government of India, Department of Revenue and Agriculture (with C.L.).
" Inspector-General of Forests (with C.L.)
Editors' Table.

# ADMINISTRATION REPORT

OF THE

# FOREST DEPARTMENT

OF THE

## MADRAS PRESIDENCY

FOR THE

## TWELVE MONTHS ENDING 30TH JUNE 1919

MADRAS
PRINTED BY THE SUPERINTENDENT, GOVERNMENT PRESS

1920

PRICE, 1 *rupee and* 12 *annas.*] [3 *shillings and* 6 *pence.*

BOMBAY BRANCH

OF THE

Royal Asiatic Society.

# ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

FOREST YEAR ENDING 30TH JUNE 1919.

## CHAPTER I.—CONSTITUTION OF STATE FORESTS.

### 1. Alteration in Area.

*Reserved forests.*—The total area decreased from 4,658 to 4,621 square miles, the decrease being due chiefly to the disafforestation of forests for the improvement of boundaries and for cultivation. *Northern Circle.*

*Reserved lands.*—Two square miles consisting of enclosures in reserved forests in *Ganjām*, 56 square miles of Cherla block in *Gōdāvari Upper*, and 12 of the Rampa forests in *Gōdāvari Lower* were added; ten acres in *Gōdāvari Lower* were transferred to the salt department and 19 in *Kistna* alienated for industrial concern. The net area at the end of the year was 491 square miles; of which, two are leased forests and about one square mile notified under section 26 of the Forest Act which will not be constituted reserved forests.

*Further reservation.*—As the protection of the large extent of unreserved lands in *Gānjam* was difficult owing to their situation, it was decided to reserve some of the valuable *Sāl* areas and their selection for reservation was in progress.

*Rampa forests in the Gōdāvari Agency.*—Four of the 21 blocks proposed for reservation in Rampa were notified under section 4 of the Forest Act. There was no progress with regard to the survey and demarcation of fifteen blocks already selected and the selection and perambulation of two additional blocks. The question of appointing a special officer with the required establishment to complete the reservation was pending the orders of the Government.

2. *Reserved forests.*—The area at the end of the year was 5,714 square miles against 5,722 at the beginning as detailed in Form No. 65. One thousand two hundred and twenty-one acres were transferred from reserved lands and 5,726 acres disafforested. *Central Circle*

*Reserved lands.*—The area of the Sandur leased forests (40,000 acres) was handed back to the Darbar on 1st July 1918 and 7,324 acres were notified as reserved lands.

The total area of the reserved forests and reserved lands at the close of the year was 5,734 square miles against 5,795 square miles of the previous year.

3. *Reserved forests.*—Additions were 1,906 acres transferred from reserved lands and five acres by adopting the area calculated by the Survey of India in *Trichinopoly*. Twenty-nine thousand four hundred and eighty-two acres were disafforested and 24,970 acres were deducted in *Trichinopoly* so that the areas calculated by the Survey of India might be adopted—a scrutiny of the old records shows that in former times an allowance of one-third was added in some instances because the ground was hilly. *Southern Circle.*

*Reserved lands.*—Four hundred and fifty acres were notified as reserved lands.

The total area of the reserved forests and reserved lands at the close of the year was 4,308 square miles against 4,393 square miles of the previous year.

4. *Reserved forests.*—The area of the reserved forests at the end of the year was 4,134 square miles against 4,133 at the commencement. Five small areas covering 1,038 acres were transferred from reserved lands. Fifty-one acres were disafforested and 172 acres wrongly included in previous years were excluded according to the revised boundary description recently published in the *Fort St. George Gazette*. *Western Circle.*

*Reserved lands.*—Ninety-two acres of unreserved lands were added. One thousand and thirty-eight acres were transferred to reserved forests and 48 acres were excluded from reservation at the settlement. The area at the close of the year was 104 square miles, of which 96 are leased forests in *South Malabar* and *Nilgiris* and 4·5, 'Todapatta lands' in the latter division.

## 2. Forest Settlement.

*Northern Circle.*

5. Three blocks of 418 square miles remained to be settled at the commencement of the year; eight blocks of about 2 square miles in *Ganjām*, one in each of *Vizagapatam* (6 acres) and *Gōdāvari Upper* (56 square miles) and four of 12 square miles in *Gōdāvari Lower* were added during the year. None of the blocks were transferred to reserved forests, but the settlement of four of these was practically completed.

*Central Circle.*

6. Two blocks in *West Cuddapah*, twelve in *Nellore* and three in *Chittoor* were finally settled; twenty blocks were pending final settlement and eighteen blocks are undergoing settlement as detailed in Form No. 66. The total cost of the settlement was Rs. 1,830.

*Southern Circle.*

7. One block in *North Vellore*, one in *South Vellore*, two in *Trichinopoly* and one in *Madura* were finally settled. Twenty-two blocks are pending final settlement and are detailed in Form No. 66. The total cost of settlement was Rs. 1,494.

*Western Circle.*

8. Eight blocks of 4·23 square miles remained to be settled at the commencement of the year; three blocks in *Mangalore North* and 3 in *Central Coimbatore* (0·141 square mile) were brought under settlement. Five of these blocks (one in *North Malabar*, one in *South Malabar*, one in the *Nilgiris* and two in *North Coimbatore*) aggregating 1·602 square miles were finally settled and transferred to reserved forests.

Of the rest, the settlement of the two blocks (2·35 square miles) in the *Nilgiris*, one block (·001 square mile) in *Central Coimbatore* and one block (0·198 square mile) in *North Coimbatore* was completed during the year; but notification under section 16 had not been published at the close of the year.

## 3. Demarcation.

*Northern Circle.*

9. *New boundaries.*—Three miles in *Gōdāvari Upper*, fourteen in *Kurnool East* and one mile in *Kurnool West* were demarcated at a total cost of Rs. 360.

*Old boundaries.*—4,558 miles are reported to have been cleared and maintained during the year by subordinates free of cost. Seven miles in *Gānjam* were recleared at a cost of Rs. 81; the boundaries of coupes according to the new working plan were demarcated permanently and a sum of Rs. 600 was spent. Twenty-four miles in *Vizagapatam* and 100 miles in *Kurnool West* were rectified and repaired and 52 miles in *Kistna* were surveyed as a preliminary to rectifying the demarcation; the expenditure incurred was Rs. 112, Rs. 397 and Rs. 228 respectively. The expenditure in *Kistna* rose from Rs. 0–14–2 to Rs. 4–6–2 per mile and the increased rate is partly attributed to the enhanced rate of wages owing to scarcity of labourers and to the dearness of food-stuffs. In *Kurnool West*, eight miles of frontier boundary adjoining Banganapalle Estate was recut and repaired at a cost of Rs. 59 met from political funds. The total length of finally notified boundaries at the end of the year was 6,266 miles, of which 5,758 miles were demarcated and 486 miles do not require artificial demarcation.

*Preliminary demarcation.*—In *Gōdāvari Lower*, the boundary of Coringa extension was recleared, and five miles thereof widened, and the boundaries of three blocks totalling 29 miles in Rampa were surveyed and demarcated; the total expenditure incurred was Rs. 645.

In *Gōdāvari Upper*, a sum of Rs. 958 was spent in maintaining 226 miles of boundaries between the zamindari and unreserved lands.

*Central Circle.*

10. Twenty-six miles were newly demarcated in *Bellary* at a cost of Rs. 1,008, about three and a half miles in *Chingleput* at a cost of Rs. 177 and one and three-fourth miles in *Chittoor* at a cost of Rs. 56; Rs. 487 were spent in *Anantapur* in repairing boundary lines for a distance of 54 miles and constructing 257 new cairns

and repairing 4,463 old ones; Rs. 243 were spent in *Guntur* on cutting and chiselling letters R. F. on 243 demarcation stones. A sum of Rs. 168 was spent in *North Cuddapah*, in repairing and improving the permanent demarcation of a reserve; a sum of Rs. 809 was spent in *Nellore* on repairing and improving existing boundaries already demarcated and for permanently demarcating 15 miles with a lockspit and mound and with solid stone slabs enclosed in cairns at the corners. About 21 miles in *Chittoor* district were permanently demarcated by cairns and lockspitting or stone lining at a cost of Rs. 724. A sum of Rs. 203 was spent in *Chingleput* for white-washing and tar-numbering the boundary stones and cutting growth in reserves.

11. Final demarcation was carried out in *North Salem*, *Trichinopoly* and *Madura* over a length of 23, 1, 23 miles respectively. In *North Vellore* 37 miles of compartment lines were demarcated with cleared lines and stone slabs at a cost of Rs. 301.

In *West Vellore* 163 miles of enclosure lines round Malaiyali villages on the Javadis were recleared at a cost of Rs. 240 and Rs. 119 was spent on cutting lines and erecting cairns in the work of the delimitation of the hill villages in the Javadis. In *North Salem* Rs. 275 was spent on the demarcation of Marandahalli extension block, widening the boundary line of Bommiampatti reserve and on the demarcation of sandal areas proposed for reservation. In *South Salem* Rs. 369 has been spent on cutting and clearing lines and buildings cairns. In *Madura* Rs. 1,295 was spent from political funds for reclearing the Madura-Travancore boundary for a length of fifty miles. Of the total length of 6,854 miles of old boundaries repaired during the year 3,581 miles are reported to have been cleared free of cost by subordinates.

12. *New boundaries.*—Eleven miles and two furlongs in *North Malabar* and eleven miles in *the Nilgiris* were newly demarcated at a cost of Rs. 1,617; the average cost per mile of forest demarcation came to Rs. 74 against Rs. 98–1–9 in the previous year. *Western Circle.*

*Old boundaries.*—Eight hundred and fifty miles of old boundaries were repaired during the year. Of these, 498 miles were cleared by subordinates free of cost in *North Malabar*, *the Nilgiris*, *North*, *Central* and *South Coimbatore*. In *the Nilgiris* the question of demarcating the authorized Irula settlements in Hulikal and other reserved forests, which had been pending for more than six years, was taken up and nine Irula settlements were surveyed in the year and their boundaries demarcated.

The average cost per mile of repairs to boundaries was Rs. 35-1-3 against Rs. 37–15–5 in the previous year.

The total length of the boundaries at the close of the year was 8,056 miles of which 6,763 miles were demarcated and 892 do not require artificial demarcation. There remained thus at the close of the year 361 miles still to be demarcated, 222 being in Kollegal.

## 4. Forest Surveys.

### (*a*) *By the Survey of India Party.*

13. No survey was undertaken.

### (*b*) *Local Surveys.*

The works carried out by the surveyors employed by the department were— the survey of the areas under working plans in *Ganjām* and *Vizagapatam*, the preparation of plans and sections for 41 miles of ghat roads and rectification of the preliminary demarcation of Cherla block in *Gōdāvari Upper*, the subdivision of the hill and plain areas covered by the preliminary working plans for Peddapur and Gokavaram ranges, the survey of the common boundary between Coringa reserved forest and its extension, the verification of the boundaries of four reserved forests and the demarcation of 26 coupes in *Gōdāvari Lower*, the survey of the boundaries of two reserved forests in *Kistna* and the alignment of cart-tracks, bridle-paths and roads in *Kurnool East* and *West*. *Northern Circle.*

### (*c*) *Maps.*

*Reference maps under section 80 of the Madras Forest Code.*—In *Ganjām*, the district reference map alone was maintained. The reference maps are reported to have been maintained and posted in the other divisions with the exception of the range reference maps in *Kistna*.

*Special district reference maps.*—None of the maps prepared by the late Forest Map Officer were printed and published. The proofs of the maps for *Ganjām* and the *Kurnools* have been prepared and verified; the publication of the final copies was pending in the Forest Map office at Dehra Dun.

(*a*) *By the Survey of India Party.*

*Central Circle.*

14. The party continued its operations in *Nellore* district. 11·684 square miles were surveyed on the 2″ scale. No survey was undertaken by the party in any other districts of the circle.

(*b*) *By the Madras Survey Party.*

No survey was undertaken during the year.

(*c*) *By Departmental Surveys.*

Survey of coupes, verification and rectification of boundaries, alignment of roads and preparation of coupe, working plan and fire maps were as usual done by the departmental staff. The survey of the disputed portion of the Seshachellam Extension A Reserve in the limits of Srinivasapuram Agraharam in *South Cuddapah* district was done by the Land Records Tahsildar of the district under the orders of the Collector.

(*d*) *Maps.*

The reference maps referred to in section 80 of the Forest Code are reported to have been maintained and posted in all districts.

*By the Survey of India Party.*

*Southern Circle.*

15. No survey work was undertaken.

*By Madras Survey Party.*

Nothing was done.

*By Departmental Survey.*

All coupes were surveyed by ordinary staff except in *North* and *South Salem* where survey work was done by Special Surveyor and in *Madura*, in the Sholavandan Range where the work was done by a Supervisor.

*Maps.*

*Reference maps referred to in section* 80 *of the Forest Code.*—These are reported to be maintained in all districts.

(*a*) *By the Survey of India Party.*

*Western Circle.*

16. Nil.

(*b*) *Local Surveys.*

In the *Nilgiris* the Forest Surveyor surveyed the Irula settlements in Coonoor Range. The other survey work done consisted of departmental surveys of coupes in *South Malabar*, *both Mangalore* divisions and *all four Coimbatore* divisions.

(*c*) *Maps.*

*Reference map under section* 80 *of the Madras Forest Code.*—These are reported to have been maintained and posted up to the end of the year.

*Special District Reference Maps.*—These maps have been printed and published by the Forest Map Office, Dehra Dun, for all the divisions except *North Malabar*, the map of which is reported to be in the Press.

## CHAPTER II.—MANAGEMENT OF STATE FORESTS.

### I. Regulation of Management.

(*a*) *Preparation and control of regular working-plans.*

*Northern Circle.*

17. *Preparation.*—Form 69 shows that working-plans for 2,738 square miles have been completed and approved. This extent includes the areas for which only preliminary working-plans and tentative working schemes have been sanctioned for

short periods. They have been taken into account, because such plans had the approval of the Board of Revenue. Regular working plans exist only for 864 square miles.

*Ganjām.*—Mr. Minchin completed the working-plan for the plains sāl forest and it is awaiting sanction. The plan for the hill forests is under preparation. *Vizagapatam.*—A plan for eight reserved forests in Sarvasidhi range was taken up and compiled and statistics were collected for the preparation of another plan for some of the fuel forests in Palkonda range. *Gōdāvari Lower.*—A tentative working-plan for the forests of Rajahmundry range (38 square miles) was sanctioned by the Board. *Kistna.*—The working-plan for the forests of Bandar range covering 92 square miles was sanctioned.

18. *Revision.*—A revised working-plan for Peddapalli reserved forest in *Vizagapatam* was prepared, but has not yet been sanctioned. It was decided to prepare working schemes to supplement the plans for the forests of Bezwada and Ellore ranges and for Kondapalli reserved forest in *Kistna* and the District Forest Officer was instructed accordingly. The schemes are being prepared.

19. *Control.*—Three fuel coupes in *Kistna* and the timber coupes on the Nallamalais prescribed for improvement felling in *Kurnool West* were not worked for want of demand. The construction of stone wall round fuel coupes on the Yerramalais in the latter division was not taken up for want of funds.

20. *Preliminary working-plan reports—Ganjām.*—Kepati sāl and Tiliki bamboo coupes were not worked for want of demand. Six fuel, five charcoal and two bamboo coupes not prescribed in the interim plan were worked to meet the local demand. A culvert in Osorobondho-Minajadi road, Deputy Ranger's quarters at Osorobondho, and kitchens for the range quarters at Kukuluba and Bontha which were not provided in plan were constructed. *Gōdāvari Upper.*—The unreserved lands in this division are under the control of the department. Working schemes for felling Yepi trees from about eight square miles of unreserved lands in Bhadrachalam taluk and mature trees from the same lands in Nugur and Cherla ranges were sanctioned by the Conservator. *Gōdāvari Lower.*—A preliminary working-plan for 70 square miles of forests in Polavaram range was sanctioned tentatively by the Conservator for two years. Three fuel and one bamboo coupes in Peddapur range were not worked for want of demand. *Kurnool East.*—The collection of minor produce which is not provided in the plan for Gudem range was undertaken to provide labour for the *Chenchus*. The roads and buildings provided in the plan were not constructed owing to financial stress. *Kurnool South.*—Some of the fellings according to the prescriptions of the preliminary working-plans for Chelama and Sirvel working circles and Giddalore range had to be set aside to facilitate the collection of hay by the Military department. Five fuel coupes covering an area of 1,037 acres in the grazing area of Sirvel working circle were felled; this felling is not provided in the plan. The periods prescribed for these plans having expired the District Forest Officer was instructed to prepare supplemental schemes.

21. *Preparation.*—In *Bellary* a simple working-plan for those areas in which fuel coupes are being worked annually is under preparation by the District Forest Officer; no progress has been made in revising the plan for the Daroji tank bed returned for revision. In *Guntūr* a preliminary working-plan for the forests of Repalli taluk was sanctioned by the Conservator during the year to be put into force from 1st April 1919; the working scheme and plans for certain forests of Vinukonda range were returned to the District Forest Officer for preparing a new working-plan in the light of the remarks made in the Inspection notes of 1st February 1919. In *North Cuddapah* preparation of no new working-plan was undertaken but proposals for the redistribution of certain coupes in Lankamalais fuel working circle of Badvel range sanctioned in Board's Proceedings Forest No. 140, dated 27th July 1908 were submitted for sanction and are pending with the Chief Conservator, the preliminary working-plan for fuel and bamboo working circles in Lankamalais returned for revision has been received and is pending inspection of forests by the Conservator. In *Nellore*, revised working-plans for the forests in Nellore and Kavali ranges comprising an area of 153 square miles have been received and are pending inspection by the Conservator. The working scheme for supply of fuel to Atmakur town was cancelled as there was no demand for the last three years. In *Chingleput*, the tentative

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working-plan for the reserves of Tiruvallur range was finally sanctioned by the Board in Board's Proceedings Forest No. 4, dated 21st January 1919. In *Chittoor* a tentative working scheme for the Horsleykonda Reserved Forest prepared by Mr. C. C. Wilson was sanctioned by the Conservator; no other plans were prepared during the year. Plans are urgently required in place of those cancelled in previous years in Chamala, Chendragiri, Chittoor and Palmaner ranges; but owing to changes of officers and the want of a working plan officer, no progress was made during the year.

22. *Control—Bellary.*—Three coupes in Adoni working-plan and seven coupes in Harpanahalli working-plan sold during 1917–18 were fully worked during the year under report. On account of the great scarcity of fodder due to want of rain the protection working circle was opened to grazing on permit, and free removal of fodder grass was also allowed. The period of grazing which was limited to six months (from July to December) in the grazing working circle of the Harpanahalli working-plan was extended to 30th June 1919. *Anantapur.*—The prescriptions of the working-plans have been deviated from for many years past and sanction of the Board was obtained in Board's Proceedings Forest Mis. No. 116, dated 14th February 1919 for cancellation of many of the prescriptions. *Guntūr.*—Two coupes in Tadepalli and Takkellapad were sold; the prescriptions of the working-plan for Kondavid reserve were not put into force as none of the coupes were sold for want of demand. Those for Kolakalur, Lam and Kuragallu reserves were not adhered to as the Board approved of the disafforestation of the reserves for assignment of land to sepoys. *North Cuddapah.*—The tentative scheme sanctioned for Kalasapad fuel series was adhered to. Three fuel coupes in the Lankamalais and three in the Nallamalais of Vonipenta Range for which no working-plans were sanctioned were leased out during the year. *South Cuddapah.*—Ten arrear coupes which were not sold in previous years for want of demand were sold during the year. *West Cuddapah.*—The prescriptions of the working-plans were generally adhered to in respect of Red Sanders area of the Sidhout Palakondas and fuel areas of Kanamalopalle and Konarajupalle Reserved Forests and Idupulapaya palmyra plantations. *Nellore.*—Four coupes were not sold for want of demand. *Chingleput.*—Eleven coupes were not worked for want of demand, two coupes were felled in advance to undertake supply of *Anogeissus* leaves and bark to Controller of Tanning Stuffs and of firewood of *Anogeissus Latifolia* to the Conjeeveram Municipality. Some of the kanchas aggregating 8,873·65 acres were not sold for want of demand and they were effectively kept closed; some of the hill areas of Chingleput and Sriperumbudur ranges were opened to grazing for want of sufficient grazing grounds in the neighbouring villages. Sonallur working circle which was selected to be worked primarily for the production of good pasture is now being worked for fuel and the Board has sanctioned the proposal to exchange it with the Appur Working Circle where the demand for grazing is keen and the growing stock poor. The Thandrai and Alamathi reserves which were to be worked solely for manure leaf cutting were sold as kanchas as the experiment of working the reserves for manure leaves proved a failure. *Chittoor.*—In the Gadipenta timber series of Mamandur working-plan, no coupes were sold for want of demand. Numbers 2 to 5 were not completely felled owing to the difficulty experienced by contractors in getting coolies. Neither cleanings nor thinnings prescribed in Mamandur working-plan were carried out as these operations were not considered necessary.

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23. Little progress was made in the preparation of new working plans as the Special Working Plans Officer who was working in the *Tinnevelly district* was taken off the work owing to the general shortage in the superior staff. During the year, however, schemes for working the bamboo areas in *South Salem* and *Trichinopoly* were prepared and sanctioned, and in *South Vellore* a revised working-plan for bamboo areas was prepared and submitted for approval; in *North Vellore* and *West Vellore* also steps were taken for the revision of the working plans for such areas. In *South Arcot* a scheme for working the fuel forests of the Kallakurichi range for a period of five years was sanctioned during the year and statistics for a similar scheme for the forests in Gingee range were collected. The working plan of Vaiyampatti range in *Trichinopoly* was replaced by a scheme sanctioned by the Board. In *Tinnevelly* a revised working plan for the Tirukurangudi working circle and a new working-plan for the Vadagarai Melpidagai and Kilpidagai reserves prepared by the District Forest Officer, Tinnevelly, were sanctioned.

24. *Control.*—Work was regularly controlled under the sandalwood working plans of all the divisions but in the Javadis where the work is permanently one year behind-hand on account of deviations rendered necessary by the cyclone of 1916. Regeneration operations could not be carried out in *North Salem* owing to exceptionally bad season and want of trained staff. The *Madura* fuel working plan also was controlled but fellings in two series of Sholavandan Range had to be postponed pending construction of an export road from Rajadani to Usilampatty the estimate for which has been received; a few coupes in the Ayyalur and Nattam Ranges were not sold for want of demand.

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In the three divisions of *Vellore* and in the Musiri range in *Trichinopoly*, large numbers of fuel coupes could not be worked either for want of demand or inaccessibility: the growth in many cases is very poor. Prescriptions of the working plans could not be adhered to in *South Arcot* on account of classification of reserves and introduction of five years' scheme of sale of growth.

In *North* and *South Salem*, the working plans require revision as conditions have changed since they were written.

25. *Preliminary working plan reports.*—Nil.

26. *Preparation.*—*Mangalore South.*—The preparation of a working plan for Nerankimale reserve is pending completion. *North Coimbatore.*—Two working-plans for fuel forests and one for a small teak plantation, were prepared; they await the personal inspection of the Conservator.

27. *Revision.*—The revision of the working plan for Begur forests in *North Malabar* was completed and is under the Conservator's consideration. The revision of the Chedleth working plan was begun, but work was stopped owing to lack of officers. In *South Malabar* the preparation of a revised working plan for the teak plantations and the adjoining natural forests was completed, and awaits the supply of maps. In *Central Coimbatore* the revision of Chinnar working plan entrusted to the Madras Forest College staff, is pending completion. *South Coimbatore* The revised working plan for the Mount Stuart and Tekkadi leased forests prepared by Mr. H. F. A. Wood was sanctioned during the year. The revision of the Amaravathi working plan was begun and was almost completed.

28. *Control.*—The prescriptions of the working plans were generally adhered to. The deviations were chiefly cases of postponing working in a compartment owing to the work in an earlier compartment not having been completed in the previous year. The only important deviations were the execution of works prescribed in the new Nilambur working plan in anticipation of its publication, and failure to carry out fellings prescribed in the new Mount Stuart working plan owing to the accumulation of large stocks of timber felled in previous years.

29. No preliminary working plan reports were prepared.

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30. *Annual plan of operations.*—The important deviations besides those detailed in paragraphs 19 and 20 supra, were—*Ganjām.*—Inspection sheds at Manitara, quarters for the Ranger, Mojjagoda, and sinking of a well at Budaguda were not taken up for want of funds. A well in the compound of the rest house at Kriamba was not sunk as it was not immediately required. Kitchen for the range quarters at Russellkonda not provided in the plan was constructed being required urgently. *Vizagapatam.*—A cart-track in Peddapalli west working circle was not constructed pending revision of the working plan. The quarters for the subordinates at Bodapalem were not constructed pending selection of a suitable site. The demarcation of Sarugudu block not provided in the plan was carried out. *Gōdāvari Upper.*—The construction of Timmuleru Somanamalla ghat road was postponed for want of a proper estimate. The demarcation of Dhanukonda extension could not be completed owing to low rates allowed in the estimate. *Gōdāvari Lower.*—Construction of a road from Kannapuram to Puliramudugudem, Deputy Ranger's quarters at Mulagalampalli and Tanna buildings at the anicut head lock and sinking of wells at Mallavaram and Veerabhadrapuram were not executed owing to financial stress. *Kistna.*—There was no progress on the Yagaram—Ramasingavaram road pending the revision of the estimate. *Kurnool South.*—The construction of new roads, repairs to existing

roads and buildings and sinking wells in Gundlakamma and Giddalore ranges were not undertaken owing to frequent changes among subordinates consequent on ill health which also affected labour considerably. *Kurnool West.*—The repairs to the rest house at Gazulapalli and construction of an inspection shed at Honkaram were given up as they were not absolutely necessary. Improvement to Pecheruvu-Munimaduguleru cart-track was dropped as a new one from Pecheruvu to Indreswaram was proposed and aligned.

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31. Besides the deviations mentioned in paragraph 22 supra, the only other important deviations were :—*Bellary.*—Ten coupes were not sold for want of demand. Repairs to a carttrack and a bungalow were not undertaken on account of the Sandur forests having been handed over to the Darbar; and the permanent demarcation of Sogi reserve was not taken up as there was no quarry near the reserve. The permanent demarcation of Rayadrug frontier line which was an incomplete work of 1917–18 and renewed in 1918–19 was not undertaken owing to a dispute in the boundary between the British and Mysore State not having been settled. *Anantapur.*—Hay operations were given up under orders and only the balance of the previous year was dealt with during the year under report. *Guntur.*—Out of 40 coupes notified for sale, only 19 were sold and the remainder were not sold for want of demand ; many works proposed in the plan of operations were given up on account of financial stress. *North Cuddapah.*—Two timber coupes and four fuel coupes were not sold for want of demand ; four road works and three building works were not taken up on account of financial stress. *South Cuddapah.*—Metalling two miles of Kodur-Kodivengammabhavi road, construction of five bridle-paths and 2 cart-tracks, construction of an inspection bungalow, an inspection shed, range office, range quarters, and subordinate's quarters, sinking of a draw well and permanent demarcation of two reserves were postponed on account of financial stress. *West Cuddapah.*—The following works could not be taken up for want of labour and funds. Construction of four roads, four cart-tracks and a bridle-path, one inspection shed, one rest-house, a range office, range quarters, and six subordinates quarters, sinking of a well in Mudampad resthouse, bunding of streams, walling of improvement coupes in Cuddapah range and permanent demarcation of Ganganapalle and extension, Kanakalakonda reserve and Idupulapaya extension. *Nellore.*—Construction of a road, two inspection sheds and a guard shed and permanent demarcation of a reserve were postponed for want of funds. Construction of a range office and quarters at Kavali was not taken up owing to the site not having been settled and sinking a well in the compound of Dachur resthouse was abandoned on account of the proposal to acquire a private well close by. The casuarina plantations in the coast range were not sold as the bids offered were very low. *Chingleput.*—The balance of unfelled areas in 15 coupes at the close of the year 1917–18 was about equal to half the area of the annual coupes ; of these 15 arrear coupes, 10 were sold during the year and the remaining four were worked departmentally as instructed by the Conservator in his inspection notes. Removal of prickly-pear, lantana and thorny species, from Guindy Park reserved forest was not undertaken as the working plan was cancelled in B.P. Forest No. 20, Mis., dated 19th January 1918, and none of the works of permanent demarcation of reserves sanctioned in the plan of operations were undertaken, as in accordance with the sanctioned working plan the outer boundary of each reserve wherever the annual coupe touches it, is being permanently demarcated. *Chittoor.*—Nine coupes were not sold and repairs to two bridle-paths, three resthouses and a well were not carried out as they were not needed.

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32. The sanctioned plan was generally adhered to. Building works on the Javadis and Pachamalais could not be completed on account of the difficulty of obtaining skilled labour. The chief deviations were the non-construction of a rest-house in *North Vellore* due to non-acquisition of the site and the postponement of boring operations at Nadanur in *South Vellore* and the construction of a tube well there in the absence of a power drill as borings made with the hand-boring set proved a failure. Residential buildings for the newly created Sholavandan range in *Madura* not provided for in the plan of operations were constructed. As a war measure tanning barks and shumac (leaves of *Anogeissus*) were collected and supplied from *North* and *South*, and *West Vellore* and *Madura* districts.

33. These were more or less generally adhered to. Deviations were chiefly cases of postponing works for lack of funds or labour, or in favour of other works of greater urgency previously unforeseen. The more important of such cases were felling and extraction of timber for the Munitions Board. *Western Circle.*

## 2. Communications and Buildings.

### (a) *Roads and Bridges.*

34. The total expenditure incurred was Rs. 16,073 against Rs. 21,970 in 1917–18 ; about 23 miles of new roads including bridges were constructed at a cost of Rs. 8,442 while 284 miles of existing roads and bridle paths were kept in repair at a cost of Rs. 7,631. The important new works of the year were the construction of four miles of cart-tracks and two Irish bridges on Tarasingi-Kukuluba road in *Ganjām*, 2 miles 7 furlongs of Kondasanta-Tadaparti road in *Vizagapatam*. Eleven miles of cart-tracks and 5 miles of Regumanipenta-Narthadikala ghat road in *Kurnool East*. *Northern Circle.*

35. The total expenditure on new works amounted to Rs. 7,404 and on repairs to Rs. 5,166, as compared with Rs. 10,780 and 6,319 in the previous year ; the decrease was due to financial stringency on account of war, only absolutely essential works having been carried out. The bulk of this expenditure was incurred in *South* and *West Cuddapah* and *Chittoor*. *Central Circle.*

The principal new works were in *South Cuddapah* (1) a cart-track to join the Kodur range boundary with the cart-track from Thummalabylu (6 miles), (2) formation of a cart-track from Arimanipenta to Bodeddulabhavi (8 miles), (3) extending Kondur-Marlabylu bridle-path ($2\frac{1}{2}$ miles), in *West Cuddapah* (1) conversion of bridlepath from Palakonda to Sandramanipenta into a cart-track ($\frac{1}{2}$ mile), (2) construction of a road from Ganganapalle to Poluthula ($1\frac{1}{4}$ miles), (3) construction of Korthimadugu-Ankamadugu road ($1\frac{1}{5}$ miles), (4) construction of the remaining portion of Kondagorlapenta cart-track (3 miles), (5) construction of cart-track from Mallelamma Devalam to Nandalur Railway station ($1\frac{1}{8}$ miles), (6) diversion of Korthimadugu road ($1\frac{1}{2}$ miles), in *Chingleput* construction of three culverts in Guindy Park. In *Chittoor* (1) Nagapatla-Pulibone road ($3\frac{1}{4}$ miles), (2) Pulithula Chatram road ($\frac{1}{2}$ mile), (3) road in coupe No. IX of Kalroadpalle ($\frac{3}{8}$ mile), (4) Nagapatla-Bhakarapet road ($3\frac{1}{8}$ miles).

36. *Tramways.*—The laying of temporary tram lines in connexion with the transport of fuel in Sriharikota fuel and Tammenapatam casuarina coupes was carried out at a cost of Rs. 19–9–0 over a distance of three and two miles from the coupes to the canal. The use of the lines and trucks was granted to the contractors as usual. Two thousand one hundred and forty-one tons were transported over the lines against 4,105 tons in the previous year.

Rupees 42–6–0 was also spent in sorting and enumeration of tram materials with a view to reconcile discrepancies in the accounts and to dispose of unserviceable materials.

37. The total expenditure on new works amounted to Rs. 48,650 and on repairs to Rs. 24,661 as compared with Rs. 59,470 and 16,910 in the previous year. The bulk of the expenditure on new works was incurred by the Forest Engineer who spent Rs. 17,425 on the completion of the Alangayam-Komattiyeri road (Gillman road), 13·77 miles, Rs. 17,324 on part construction of the Amerdi-Nadanur road, 11·30 miles, and Rs. 10,697 on repairs and improvements to the Gillman road. In addition a sum of Rs. 511 was spent by him on the investigation of the Komattiyeri-Patrakad trace, 10·75 miles, and Rs. 1,792 on the construction of buildings in connexion with the road works. *Southern Circle.*

The chief new construction works carried out by District Forest Officers were :—

*North Vellore.*—Completion of Thottalam-Naickeneri and the Pinnathurai-Amerdi roads. Cost Rs. 1,647.

*Trichinopoly.*—Completion of the Kalpatti-Pillayarnattam road.

*Madura.*—(*a*) Road up the Sathiar valley in the Sirumalais, $3\frac{1}{2}$ miles, at a cost of Rs. 3,438, (*b*) the Sirumalai-Nattam-Dindigul road, 2 miles, at a cost of Rs. 972. These two works are still in progress.

Satisfactory progress could not be made by the Forest Engineer on the Amerdi-Nadanur Ghaut road as coolies imported from the plains ran away on account of an outbreak of influenza and every endeavour made to bring them back ended without success; moreover the rates provided in the sanctioned estimate were found low and a revised estimate for Rs. 1,75,400 was prepared and has since been sanctioned by Government— the work is now being pushed on with.

An estimate for Rs. 1,33,700 for the Komattiyeri-Patrakad road has been sanctioned in G.O. No. 1215, Revenue (Special), dated 20th June 1919. Arrangements are being made to put the work in hand. The Forest Engineer has also prepared the plans and estimates amounting to Rs. 2,68,900 for the Paramanandal Melpat Ghaut road and preliminary estimates for the investigation of Komattiyeri-Kuttathur road and Nadanur-Mandaparai bridle-path.

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38. The expenditure on new works amounted to Rs. 17,282 and on repairs to Rs. 27,498 against Rs. 17,927 and 21,664 respectively in 1917–18. Sixty-one miles of roads and bridle-paths were constructed, but it is impossible to ascertain from the District Forest Officer's reports what proportion of this length was completed. The more important new works of the year were:—*North Mangalore*—Commencement of the construction of Kursegudde-Raghithlu road and the Nujinane road extension. *Mangalore, South*—Construction of Coupe No. II road of Jalsur East reserve, an approach road to Parappa reserve, completion of an approach road to Kollamogaru rest-house and cart-track for the extraction of fuel from Coupe No III of Kalingimale, altogether 4 miles and 5 furlongs of new road, were constructed. *South Malabar*—Completion of the construction of the Nellikutha-Palat road and of the bridle-path from Neelikal to the foot of the hills. Construction of a bridle-path from Poochipara to Shola. *Nilgiris*—Construction of the College main road and aligning the road trace of the College lower road. *Kollegal*—Two miles of bridle-path from Hosur to Cowdalli. *North Coimbatore*—Metalling 2 miles of Hassanur-Bailur road and 2 miles each on Barghur and Kadambur Ghaut roads. *South Coimbatore*—Extension of Aliar cart-track for a distance of 1 mile and 2 furlongs and construction of Anaipadi bridge.

39. *Tramway.*—A pakka bridge was constructed over the Anaipadi stream. The following is taken from the District Forest Officer's report:—

"The tramming was done solely by Government bulls. The outturn of work during the year under report was 8,941, 21/84 ton miles only against 9,584, 61/80 ton miles in the previous year. Hence the Tramway account shows a net loss in this year of Rs. 8,306–4–6 against a profit of Rs. 6,234–5–2 in the previous year. The above figures cannot be taken for purposes of comparison. The distances over which tramming has to be done would appear to have been over-estimated in the past. Again it would appear that quite fantastic figures had been adopted for some years past for the supposed cost of carting if we had no tram line which make the tram line appear to be more advantageous than it is. The figure taken as the imaginary cost of carting one ton mile has in the past been Rs. 1–12–0. The actual cost of carting one ton mile between Sethumadai and Pollachi is As. 4–3. This year the writer has attempted to arrive at a more accurate statement of facts. The working charges increased from Rs. 1–4–5 per ton mile to Rs. 1–9–11 per ton mile. The increase in working expenses is due to (1) debiting to this year value of tramway materials purchased in the previous year, (2) construction of a pakka bridge at Anaipadi, (3) high cost at which provisions had to be purchased for Government bulls.

"The tram line itself is in a deplorable state but the writer has no reason to suppose that it is worse than it has been during the previous 30 odd years of its existence. The gradients are excessive, 1 in 12 being common and the radii of the curves are so short as to make it a matter of the greatest surprise that derailments are not more frequent than they are. Many of the worst curves are without check rails. Steps are being taken to rectify the omission."

In any case, the figures mean little or nothing in the absence of a capital account. No business firm would charge against the working expenses of any one year the cost of building a bridge or purchase of material.

40. *Work of the Forest Engineer.*—An estimate was prepared by Mr. F. J. Marshall and submitted to Government for constructing a steam-tramway from Anamalai to the Tekkadi leased forests. The estimated cost was about 6 lakhs. The estimate was returned for revision at current market rates and was pending at the end of the year.

(*b*) *Buildings.*

41. Rupees 5,375 were spent on new works and Rs. 18,832 on repairs and maintenance as against Rs. 8,388 and Rs. 14,831 respectively in 1917–18. Quarters for a deputy ranger at Osorobondho in *Ganjām* were built. Quarters for a deputy ranger at Chintala and the range office and out-houses to the range quarters at Cherlopalli in *Kurnool East* and the combined range office and quarters at Racherla in *Kurnool South* were in progress. The office for the range officer of Lakkavaram at Chintur in *Gōdāvari Upper* was commenced. *Northern Circle.*

42. During the year, the total expenditure on new buildings and on repairs amounted to Rs. 17,273 and Rs. 16,170 respectively against Rs. 13,425 and Rs. 12,336 in the previous year. The following work was done in *Bellary*—Construction of a latrine at the District Forest office. *Guntūr*—Completion of the inspection shed at Venkatayapalem, construction of quarters for the deputy ranger at Srigiripad and part construction of subordinates' lines at Srigiripad. *North Cuddapah*—Completion of rest-house and out-houses at Vathamadugu and Kothabhavi in Lankamalais. *South Cuddapah*—Construction of subordinates' quarters at Papanasanam, of a rest-house and out-houses at Bodeddulabhavi, of a Horne-typed thatched shed at Thummalabulu, of an inspection shed at Kutalamarri, part construction of a rest-house with out-houses at Kodivengammabhavi, of a pakka rest-house and out-houses at Thummalabulu, and conversion of the Kodur range office roof into a gabled roof. *West Cuddapah*—Completion of inspection shed at Polathula, of a combined range office and quarters at Sanipaya, part construction of subordinates quarters at Sanipaya, of a rest-house with out-houses at Gadikota and of a kitchen and servants' quarters at Polathula. *Nellore.*—Completion of out-house and latrine to the Kanigiri range quarters. *Chingleput*—Construction of two lodges for gate-keeper at Velacheri and Taramani gates in Guindy Park reserved forest. *Chittoor*—Completion of Nallagutta hill bungalow, of subordinates' quarters at Mamandur, part construction of a combined range office and quarters for Mamandur range. *Central Circle.*

43. During the year the total expenditure on new buildings and on repairs amounted to Rs. 36,235 and Rs. 13,406 respectively against Rs. 29,732 and Rs. 9,867 in the previous year. The more important works done during the year were :— *Southern Circle.*

*South Vellore.*—Completion of the subordinates' quarters at Thongamalai, construction of a rest-house at Bhimarapatti and the commencement of the subordinates' lines at Bargur and of a rest-house at Komattiyeri.

*West Vellore.*—Completion of the rest-house at Pudur and deputy ranger's quarters at Kuttathur and extension of sandalwood godown at Tiruppattur and part construction of deputy ranger's quarters at Nellivasal.

*South Arcot.*—Construction of a rest-house at Lalapet.

*South Salem.*—Construction of a subordinate's quarters at Kottapatti and completion of the rest-house at Mayambady.

*Madura.*—As in the previous year very good progress was made and over Rs. 11,000 were spent: the rest-house at Kallathu, the range office at Ayyalur and the subordinates' line at Andipatti and an inspection shed at Tope in the Karandamalais were completed.

44. The expenditure on new buildings amounted to Rs. 16,003 and on repairs and maintenance to Rs. 10,543. The figures for the previous year were Rs. 15,259 and Rs. 9,725 respectively. The principal new works of the year were :—*Mangalore North*—Construction of range officer's quarters at Coondapoor with out-houses and a guard's shed. *Mangalore South*—Rest and out-houses at Parappa, deputy ranger's quarters at Kandatka, and subordinates' lines at Kollamogaru. *North Malabar*—Construction of a rest-house at Golur (incomplete) and subordinates' lines at Makki and Vageri. *Nilgiris*—Subordinates' lines at Masnigudi. *Kollegal*—Subordinates' lines at Lingamankarai and completion of out-house to Ponnachi rest-house. *North Coimbatore*— *Western Circle.*

The extension of Satyamangalam depot building. *South Coimbatore*—Completion of the subordinates' line at Kallapuram; part construction of the overseer's and sub-overseer's quarters at Sethumadai under the supervision of the Forest Engineer.

(*c*) *Miscellaneous works.*

*Northern Circle.* 45. The expenditure under this head was Rs. 2,191 against Rs. 3,421 in the previous year. The new works were—the sinking of one well in each of *Ganjām* and *Kurnool East*; one well in *Ganjam* was reconstructed, one step well in *Kurnool East* and a spring well in *Kurnool South* were converted into draw wells for the use of subordinates.

*Central Circle.* 46. Three new wells were sunk and 15 existing wells were repaired or deepened. In *South Cuddapah*, construction of a trial well at Kodivengammabhavi was given up as it was found not necessary. In *Nellore*, a sum of Rs. 148 was spent on experimental boring at Potlur, and about Rs. 200 still remained to be paid to the Agricultural department. The result was not successful. Improvements to ponds in grazing blocks were carried out.

*Southern Circle.* 47. Well-boring operations were carried out at five places on the Javadis. A protected draw well at Muthanur on the Yelagiris is under construction. In *Madura* water-pipes were laid in the Bryant Park at Kodaikānal and two new wells were dug.

*Western Circle.* 48. The total expenditure was Rs. 3,823 against Rs. 1,481 in the previous year and the chief works carried out were sinking wells in *Mangalore North* and *South*, *Kollegal*, The *Nilgiris*, *North* and *South Coimbatore* and opening a canal in the Beypore depot in *South Malabar*.

*Telephone.*—The condition of the telephone line in *South Coimbatore* is reported by the District Forest Officer to be unsatisfactory owing to the fact that he has no powers of supervision over the linesman. Part of the line was out of order the whole of the year.

3. PROTECTION OF FORESTS.

(*a*) *General protection.*

*Northern Circle.* 49. The following statement shows the number and classification of forest offences reported during the year as compared with those of the previous year and the average of the three years ending with 1917–18:—

| Cases | Injury to forests by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total. | | Average for three years ending with 1917–18. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18 | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. | |
| Cases taken to court. | 11 | 11 | 509 | 542 | 96 | 102 | 77 | 102 | 693 | 757 | 637 |
| Cases compounded | 2 | 7 | 1,837 | 1,855 | 426 | 552 | 315 | 198 | 2,580 | 2,612 | 2,650 |
| Cases undetected. | 284 | 272 | 128 | 105 | 3 | .. | .. | 2 | 415 | 379 | 396 |
| Total .. | 297 | 290 | 2,474 | 2,502 | 525 | 654 | 392 | 302 | 3,688 | 3,748 | 3,683 |

The total number of offences increased by 1·6 per cent over that of the previous year and by 1·7 per cent over the average of the three preceding years. Compared with the offences of the previous year, the offences under *injury by fire* and *other offences* decreased by 2·3 and 23 per cent respectively while those under *unauthorized fellings* increased by 1·1 and *unauthorized grazing* by 24·5 per cents. The decrease under *injury by fire* was due to a fall in cases of incendiarism which were treated as undetected offences while that under *other offences* which occurred chiefly in *Vizagapatam* and *Gōdāvari Upper* is attributed to better and closer supervision in the former and to the efforts taken in the latter in explaining to the hill tribes to avoid *podu* cultivation close to the boundaries of forests. The increase under *unauthorized felling* was chiefly in the *Gōdāvaris* due to vigilant and effective supervision, in *Kistna* to the effect of patrol by beat *cum* gang system and in *Kurnool West* to poor people resorting to forests for illicit removal of timber and fuel having no means of

living owing to failure of rains. The effect of patrol systems in *Kistna* and *Kurnool East* and the drought and consequent want of fodder in unreserved lands in *Kurnool South* and *West* chiefly accounted for the increase under *unauthorized grazing*.

Of the cases disposed of by the Courts, 89·7 per cent ended in conviction against 82·6 in the previous year. The punishments inflicted by the Magistrates are reported to be generally satisfactory except in the *Gōdāvari Upper* and *Kurnool West*.

*Compounded offences.*—The number of cases compounded and the amount of fees realized were 2,037 and Rs. 18,299 respectively against 2,150 and Rs. 24,548 in the previous year. The decrease in the amount of fees realized was due to the moderation of fees in *Ganjām* owing to famine condition, and to a decrease in the number of cases compounded in *Vizagapatam* and *Kurnool East* coupled with the fact that heavier fees were levied for the offences in unreserved lands in the former district during 1917–18. The rules for compounding grazing offences were generally observed.

*Undetected offences.*—The number of undetected offences decreased from 415 last year to 379 during the year. About 72 per cent of these cases were fire occurrences which are always difficult to trace.

*Holding adjacent villagers responsible for commission of offences in particular forests.*—The notifications of warning to villagers regarding their responsibility were as usual published in *Vizagapatam*, *Gōdāvari Upper* and *the Kurnools*. No action was taken in *Ganjām*, *Gōdāvari Lower* and *Kistna*, but in the second division the *Koyas* responsible for thefts of timber from two of the reserved forests had their rewards for fire protection reduced or cut off.

50. *Rewards.*—In *Vizagapatam*, a sum of Rs. 35 was granted to subordinates for detecting a case of goat browsing in which 232 goats were involved. In *Kurnool East*, rewards aggregating Rs. 12-8-0 were granted to subordinates and two *Chenchus* in a grazing offence. Rupees 6 was given as rewards to subordinates in *Kurnool West* in a forest offence.

51. The following statement shows the number of offences detected during the year compared with the previous year :— *Central Circle.*

| Cases. | Injury to forests by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. |
| 1. Cases taken into court. | 4 | 4 | 1,243 | 1,452 | 910 | 1,216 | 111 | 86 | 2,268 | 2,758 |
| 2. Cases compounded .. | 3 | 5 | 3,490 | 3,121 | 2,424 | 2,323 | 205 | 187 | 6,122 | 5,636 |
| 3. Cases undetected .. | 203 | 97 | 94 | 135 | 32 | 28 | 16 | 8 | 345 | 268 |
| Total .. | 210 | 106 | 4,827 | 4,708 | 3,366 | 3,567 | 332 | 281 | 8,735 | 8,662 |

52. There was a slight decrease under all heads except unauthorized grazing. The increase under unauthorized grazing was chiefly contributed by Nellore and was due to better protection and vigilant patrol by kanchadars and section officers.

Two thousand three hundred and four cases were taken into court and 2,132 ended in conviction, 172 were acquitted and the percentage of failure slightly increased from 7 to 7·47 per cent nearly. It is noteworthy that none of the cases taken into court in *South Cuddapah* ended in acquittal. The percentage of failures in *West Cuddapah* is double that of the previous year and the District Forest Officer explains this as having been "due to dismissed subordinates appearing as prosecution witnesses and being gained over and also to some of the cases not having been properly worked up."

Four thousand six hundred fifty-one cases were compounded for Rs. 63,759 against 5,715 cases for Rs. 64,019 in the previous year.

Rupees 2,486 were levied as fines on kanchadars for neglecting protection of kanchas.

The punishments awarded by the magistrates are reported to be generally adequate in all districts except Chittoor, in which district, the inadequacy of the penalties appears to be very marked and the District Forest Officer, in support of this, points out that the number of cases taken to court increased from 88 to 172 in 1917–18 and to 335 in 1918–19 and the number of cases in which compounding

fees were paid dropped from 1,167 to 1,119 in 1917–18 and to 1,042 in 1918–19, but the percentage of acquittals has not risen. The Collector of that district remarks as follows :—

"I issued the following circular to magistrates last year in my character of District Magistrate :—

"Extracts from the Forest Administration of the district are forwarded to sub-divisional magistrates and sub-magistrates. In determining the punishment in cases of conviction under the Forest Act, a magistrate must consider not only the damage done to the forest but the bad example given to others.

"The persons convicted are often very poor and unable to pay a substantial fine. Such persons may be sentenced to short terms of imprisonment without fine.

"I think on the whole forest cases were dealt with with more discrimination in 1918–19 than in 1917–18. The District Forest Officer attributes the increase in the number of cases that went into court to the leniency of magistrates. But on his own figures the real cause would seem to be the increasing severity of the compounding fees imposed which rose from Rs. 2–13–0 per accused to Rs. 4–1–0 per accused."

*Holding adjacent villagers responsible for commission of offences in particular forests.*—Notices warning the villagers of their responsibility and of the punitive measures which would be taken in case of commission of offences in the adjoining forests were published in Guntūr. As a result of a large fire which burnt the whole area (5,920 acres) of Gundu reserve of Bellary district, it was proposed to close the reserve to grazing but the Board suggested enhancement of grazing fees by 50 per cent ; the matter is under correspondence with the Chief Conservator. In Chittoor district the closure to grazing of the Urukonda reserve of Madanapalle range for two or three years on account of numerous illicit fellings and of Nagapatla reserve of the Chamala range, Pulikonda resesve of Madanapalle range and Airala A reserve of Chittoor range, during 1919–20 on account of the failure of the adjoining villagers to render help in extinguishing fire has been recommended and final orders are awaited. In Nellore district, complete arrangements are in force under the kancha system for holding adjacent villagers responsible for commission of offences. Kanchadars who are for the most part villagers themselves are under an agreement to protect the kanchas entrusted to their care and are subject to penalties of fine, suspension, or cancellation of lease, etc., for voilating kancha rules.

*Rewards.*—In Anantapur district a sum of Rs. 50 was granted as reward to forest subordinates for good work in connexion with a goat browsing case, in North Cuddapah, Rs. 45 was given to the Range Officer, Badvel, and two police constables who rendered help in the successful detection of a case of illicit removal of timber. In West Cuddapah, rewards to the extent of Rs. 100 were granted to forest subordinates, village officers, police sub-inspectors and some outsiders for successful detection of organized illicit removals of timber. In Chittoor, small rewards amounting to Rs. 29–5–0 were given for successful detection of cases of illicit shooting, grazing and felling. In Nellore, a list of kanchadars who really deserve reward for good protection is being prepared; the preparation of this list is one of the chief difficulties in working the kancha system. As the number of kanchas increases, the list gets unwiedly and it is difficult to check the proper grant of rewards. A ranger has since been posted for the inspection of kanchas and enforcement of the rules.

53. *The rules for the guidance of Forest officers in compounding forest offences in* G.O. No. 1990, dated 13th June 1910, and the rules prohibiting District Forest Officers passing orders to confiscate the seized property when compounding an offence were generally observed throughout the circle.

*Southern Circle.*

54. The following statement shows the number of offences of the year compared with the previous year :—

| Cases. | Injury to forests by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total cases. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. | 1917–18. | 1918–19. |
| Cases taken into court .. | 11 | 8 | 2,553 | 2,390 | 499 | 571 | 52 | 83 | 3,115 | 3,052 |
| Cases compounded .. | 1 | 3 | 5,968 | 5,356 | 1,552 | 1,570 | 117 | 178 | 7,638 | 7,107 |
| Cases undetected .. | 587 | 369 | 147 | 81 | 24 | 44 | 4 | 5 | 762 | 499 |
| Total .. | 599 | 380 | 8,663 | 7,827 | 2,075 | 2,185 | 173 | 266 | 11,515 | 10,658 |

The fall in the number of offences is principally due to the disafforestation of isolated reserves and placing "Class V" reserves under panchayat management. In *North Vellore*, the fall is attributed to a less number of offences of unauthorized felling of agricultural implements owing to the unfavourable weather which interfered with the agricultural operations. In *South Arcot*, there was a considerable fall due to the disafforestation of certain areas and to the concentration of the establishment on the forests which the department is to retain the supervision of. On the other hand there was a large increase in *North Salem* and this is attributed to the exceptionally bad season which drove many people to steal in the forests to eke out their livelihood and to the increased vigilance of the protective staff.

The slight increase under 'Unauthorized grazing' was generally due to the enhancement of grazing fees which tempted some people to evade taking out permits and that under 'other offences' consists of small increases in almost all the districts and does not call for any special remarks.

Out of the total of 10,658 cases, 2,856 relate to unreserved lands of which great majority are, as usual, unauthorized felling cases. The figure does not include cases in unreserves in *Tinnevelly* which have not been reported.

*Cases brought to trial.*

| Year. | Convictions. | Acquittals. | Percentage of failure. |
|---|---|---|---|
| 1917–18 .. .. .. .. .. | 2,945 | 133 | 4·32 |
| 1918–19 .. .. .. .. | 3,062 | 123 | 3·86 |

As compared with the previous year, there was an increase in the number of cases brought to trial. This was chiefly due to cases having been taken to court for non-payment of compensation fees. It is also attributed to light punishments inflicted by certain magistrates in *West Vellore* and *North* and *South Salem* and consequently the accused prefer trial by magistracy to payment of compensation fees. The District Magistrate of North Arcot has looked into this matter. In other cases it is not stated whether attention has been drawn to the need for enhanced sentences. It is satisfactory to note that there has been a reduction in the percentage of failure :—

*Cases compounded.*

| Year. | Number of cases. | Amount. |
|---|---|---|
| | | RS. |
| 1917–18 ... ... ... ... ... ... ... | 6,883 | 54,349 |
| 1918–19 ... ... ... ... ... ... ... | 5,939 | 49,032 |

In fixing the amount of compensation, attention was generally paid to the orders contained in G.O. No. 1990, Revenue, dated 13th June 1910.

*Important cases.*

55. *South Vellore.*—Two accused were sentenced to rigorous imprisonment for three months for stealing sandalwood. A case of systematic illicit grazing of plains cattle on the Javadi plateau exclusively reserved for Malayalis was detected and the accused was fined Rs. 100. A case of mischief by fire on sandal growing on patta land is pending trial.

*West Vellore.*—The sandalwood theft case referred to in last year's report ended in conviction and two of the accused were fined Rs. 10 each. A case of illicit felling of a sandalwood tree 40″ in girth in Tenmalai Javadis was detected. Of the two accused concerned in the case, one was sentenced to three months' rigorous imprisonment and the other absconded. A case of smuggling of sandalwood by a merchant of Ambūr was also detected. The accused was convicted and sentenced to undergo rigorous imprisonment for six months.

*Trichinopoly.*—Two cases of smuggling of sandalwood were detected and both of them ended in conviction. In one of these cases over 3 cwt. of sandalwood was seized.

56. *Rewards.*—Small rewards aggregating Rs. 147 were given for successful detection of goat-browsing cases in *South* and *West Vellore* and *South Arcot* districts and a case of sandalwood smuggling in *Trichinopoly* district.

*Western Circle.*

57. The offences reported during the year are compared with those of the previous year and with the average of the three preceding years in the following statement:—

| Class. | Injury to forest by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total cases. | | Average for three years ending 1917-1918. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19 | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | |
| (*a*) Cases taken into court. | 18 | 14 | 260 | 282 | 126 | 121 | 66 | 104 | 470 | 521 | 548 |
| (*b*) Cases compounded. | 63 | 53 | 1,480 | 1,444 | 496 | 636 | 202 | 237 | 2,241 | 2,370 | 2,513 |
| (*c*) Cases undetected. | 400 | 186 | 39 | 7 | 1 | 6 | 2 | 2 | 442 | 201 | 434 |
| Total .. | 481 | 253 | 1,779 | 1,733 | 623 | 763 | 270 | 343 | 3,153 | 3,092 | 3,495 |

The total number of offences decreased by about 2 per cent as compared with the previous year and by 12 per cent as compared with the average of the three preceding years. The decrease is chiefly under 'injury to forest by fire', in *North Coimbatore*. In this division serious fires appear to occur only every alternate year, and the past year was a good one. There was a very large increase in felling and grazing offences in *Kollegal* attributed to better protection, but as this is given as a reason for decrease in other divisions the true reason is open to doubt.

The number of offences prosecuted during the year was 521 and there were 167 cases pending from the previous year. Out of the total of 688 cases taken to court, 570 were disposed of and 118 were pending disposal at the close of the year. There were 519 convictions and 51 acquittals, the percentages of convictions and acquittals being the same as those of the previous year, viz., 91 and 9, respectively. The punishments inflicted by the Magistrates are reported to be generally satisfactory except in *Mangalore North* and the *Nilgiris*.

*Compounded offences.*—The number of cases compounded and the amount of fees realized were 1,914 and Rs. 25,604 respectively against 1,979 and Rs. 30,016 in the previous year. The average compounding fee was slightly higher than in the previous year owing to the imposition of heavier compounding fees for grazing in *North Coimbatore* concurrently with the increase in the grazing fees. There were 251 cases withdrawn during the year against 217 in the previous year. The rules for compounding grazing offences were observed generally.

*Undetected offences.*—The number of undetected cases compared with those of the previous year decreased by 55 per cent mainly under 'Injury to forest by fire.'

*Holding adjacent villagers responsible for commission of offences in particular forests.*—The notification warning the villagers on the subject was as usual published in all the divisions except in the two *Malabar* divisions where this system is not required.

58. *Rewards.*—Rewards amounting to Rs. 167 were granted to subordinates and others for helping in the detection of offences. The chief amounts were granted in *North Mangalore* for sandalwood cases. The Nilgiri Game Association paid Rupees 88-4-0 to subordinates for detecting cases of poaching. In *North Malabar* small rewards were paid to Kurubers for successful protection from fire. There were no offences of any special importance during the year.

(*b*) *Protection from fire.*

*Northern Circle.*

59. *Special protection.*—In spite of the season having been very dry and unfavourable, the results were fairly satisfactory. There was no change in the system of protection. The assistance of the *Khonds* in *Ganjām* and the *Koyas* and *Reddis* in the *Gōdāvaris* was, as usual, enlisted in fire-protection operations. They were granted rewards on the results of protection in addition to the payment of wages for their labour. The area over which protection was attempted was 2,373 square miles against 2,360 in the previous year. The increase was in *Kurnool West* where additional areas in two of the ranges were brought under rigid protection. The area burnt was

about 401 square miles resulting in 83 per cent of success against 86 in the previous year and 90 in 1916-17. About 39 per cent of the area burnt was in *Gōdāvari Upper* and 56 in the *Kurnools*. In *Gōdāvari Upper* the absence of hot weather rains led to increased burning. A better final report in *Kurnool West* raised the figures, while this was partly balanced by the drought in *Kurnool East* which caused a scarcity of grass. In *Kurnool South*, a large extent was burnt in Sirvel range with the connivance of subordinates to cover up the extensive illicit fellings of timber and in Gundlakamma range where most of the fires were caused by a gang of untractable *Chenchus* of the *West* who committed also several dacoities.

The cost per square mile successfully protected was Rs. 21-15-5 against Rs. 23-6-9 in the previous year.

60. *General protection.*—The area attempted to be protected was 2,189 square miles against 2,293 in the previous year. The percentage of failure fell from 9·1 to 4·9.

61. The number and origin of fires are given in Appendix A. The number of fires rose from 342 to 349, while the area burnt decreased by about 4 per cent.

62. *Special protection.*—There was no change in the system of fire protection. The area of forest tracts protected is shown in Form No. 72. The area attempted to be protected was 2,275 square miles against 2,346 square miles in the previous year and the area burnt was 81 square miles against 276 square miles in the previous year. In *Bellary*, all the felled coupes and the plantations of Adōni range were fire-protected as usual. The fire-protection operations prescribed for Harpanahalli range, namely, scraping grass around coupes, were not carried out as the operations were found to be very costly. Two big fires occurred in unprotected areas in *Bellary* and Somalapuram reserves burning an area of 950 and 1,036 acres respectively. Four fires occurred in Bandri reserve—two in unprotected areas burning 1,250 acres and two in protected areas burning 1,280 acres against 9,291 acres attempted to be protected during the year. The whole of Gundu reserve was burnt owing to incendiary fires and steps are being taken to enhance the grazing fees. There were on the whole comparatively fewer fires during the year. In *Anantapur*, there were 32 fires in all burning 10·39 square miles against 95 fires of 48·18 square miles and fires were not heavy anywhere which is mainly due to absence of inflammable material on the ground, the available grass having been cut and removed. Help was generally rendered by villagers adjoining reserves and none of the reserves were closed in the year as a punitive measure. In *Guntūr*, no areas were specially fire-protected during the year. Ten fires covering an extent of 113 acres were reported during the year and all these were due to the carelessness of way farers. The closure of parcelles 32 and 33 of Gangalagunta reserve for two months in 1917-18 as punishment seems to have had a salutary effect on the villages adjacent to forests. In *North Cuddapah*, the smaller area burnt during the year is said to be due to the timely fire-tracing operations and to the constant and vigilant patrol of the subordinates. There were two cases of malicious firing and both were taken to court; one ended in conviction and the other is pending disposal. In *West Cuddapah*, the decrease in the area burnt is ascribed to the continuance of enhanced grazing fees ordered in B.P. Rout. No. 1048, Forest, dated 8th August 1917, during 1918-19 also and to timely fire-tracing operations and to vigilant patrol. In *Nellore*, there were very few fires during the year owing to timely fire-tracing operations. The withdrawal of the permission to remove grass had the desired effect. In *Chittoor*, 59 fires occurred burning over 2,947·60 acres as against 134 fires of 15,955 acres in the previous year. It is difficult to correctly account for the decrease more especially as the season of 1918-19 was a very dry one; some good showers of rain in April and May undoubtedly helped by shortening the fire season considerably. The villagers adjoining Nagapatla, Pulikonda and Airala A reserves did not render sufficient help in putting out fires. Proposals have been submitted for enhancing the grazing fees for these reserved forests and orders are awaited.

*Central Circle.*

63. *General protection.*—The percentage of failure fell from 9·29 to 2·03.

64. The number and origin of fires are given in Appendix A.

65. *Special protection.*—There was no change in the system of fire protection. The reward system gives good results and it was introduced in parts of *North Vellore* and *Trichinopoly* districts. The area attempted to be protected was 1,510

*Southern Circle.*

square miles against 1,433 square miles in the previous year. During the year the Pachamalais in *South Salem* were transferred from general to special protection and in *Madura*, the reserves of Palni range and Andipatti North and South blocks were brought under special protection. The area burnt during the year was 29·33 square miles against 42·13 square miles in the previous year and the percentage of area successfully protected during the year was 98·05 against 97·05 in the previous year. The cost per square mile of successfully-protected area fell from Rs. 13–1–10 in the previous year to Rs. 12–6–0 during the year under report. These results are, I think, satisfactory in view of the driness of the season.

66. *General protection.*—The percentage of failure was only 1·15 per cent against 2·39 per cent in the previous year.

67. The number and origin of fires are given in Appendix A. There were 379 fires burning 38,506 acres in the reserved forests against 599 fires burning 68,280 acres in the previous year. It is satisfactory to note that in all the districts except *Tinnevelly* the numbers of fires as well as the areas burnt were less than those of the previous year. There were 45 fires burning 12,973 acres in *Tinnevelly* against 31 fires of 4,820 acres in the previous year. Extensive areas were burnt in grazing compartments which were in consequence closed to grazing. Only in one case were the culprits detected and they were sentenced to six months' rigorous imprisonment each. In July 1918 there was a large fire in the Chintamani and Vasudevanallur grazing compartments. Of the subordinates who were engaged in putting out the fire one guard was unfortunately burnt to death and another guard and two deputy rangers were badly burnt. I heard that the accident was due to counterfiring and the men were caught between the two fires. The widow of the guard was compensated.

*Western Circle.*

68. *Special protection.*—The usual methods of fire protection were followed. The area over which protection was attempted was 1,049 square miles against 1,014 in the previous year. The increase was in *North Mangalore*, *Nilgiris Central* and *North Coimbatore*. There were 354 fires, the area burnt being about 21 square miles. The percentage of success was 97·99 compared with 95·16 in the previous year and 98·3 in 1916–17. Protection was very good in *South Coimbatore* where no fires occurred; heavy rain in March no doubt contributed to this result. Protection was good also in *North Mangalore*, *North Malabar*, *Nilgiris* and *Kollegal*. In *South Coimbatore* the assistance of hill tribes was as usual enlisted and a reward paid to them for successful protection. The cost of successful protection per square mile was Rs. 29–5–11 against Rs. 27–8–8 in the previous year, the rise being due to the increase in the price of food-stuffs.

69. *General protection.*—The area over which protection was attempted was 2,610 square miles against 2,605 in the previous year. The percentage of failure fell from 2·4 in the previous year to 1·6.

(*c*) *Protection from cattle.*

*Northern Circle.*

70. The proportion of reserved forests and reserved lands open or closed to grazing was as follows :—

| | 1918–19. | 1917–18. |
|---|---|---|
| Open to all animals except goats for the whole year ... | 74·4 | 73·5 |
| Closed to all animals for the whole year ... ... | 19·3 | 26·3 |
| Closed to all animals for part of the year ... ... | 6·3 | 0·2 |

Goats with the exception of a few under the rights admitted at forest settlement, were excluded from forests. There was a decrease in the area closed to grazing for the whole year in *Godavari Lower* due to the incorrect figures furnished in the last year's return and in *Kurnool East* where all the forests were open to grazing for a period of four months on account of unfavourable season.

71. *Incidence of grazing.*—The incidence exceeds the possibility in several reserves. It remains to be seen whether the recent enhancement in the fees in the *Kurnools* will reduce it appreciatively.

72. *Introduction of the forest village system.*—The results of the enhancement of fees in the *Kurnools* during 1919–20 are awaited before taking steps to introduce the system in those divisions. The system is not suitable to the conditions of the other districts.

73. The number of cattle impounded was 25,145 as compared with 16,737 in the previous year and 22,379, the average of three years. Compared with the figures of the previous year, the increase was mainly in the *Kurnools* due to a large increase in the number of grazing offences.

74. The area closed and open to grazing is exhibited in Form 73. The total number of animals grazed on payment amounted to 588,511 cow units against 708,710 in the last year. The decrease was due to the enhancement of grazing fees in Anantapur district and to fewer foreign and local cattle resorting to the forests in consequence of the poor growth of grass owing to failure of monsoon in Guntūr district. *Central Circle.*

As in previous years all reserves except Sriharikota reserve and casuarina plantations in Nellore district were worked under the kancha system during the year. Felled coupes were attached to the adjoining kanchas and were protected by the kanchadars. The unsold kanchas were protected by departmental staff. There were 365 kancha leases with an area of 281,221 acres open to grazing and 12,690 acres of closed area given to kanchadars for protection. Protection of kanchas in the Chingleput district was on the whole satisfactory. In Guntur district the kancha system was first introduced during the year and 2·67 square miles were placed under the system.

*Semi-wild cattle.*—The protection of the forests under closure in Sriharikota island of Nellore district remains a problem yet to be solved. The grazing fees were enhanced to one rupee per cow unit.

75. *Incidence of grazing.*—In *Bellary*, the question of judiciously enhancing the grazing fees with a view to limiting the number of cattle to the possibility of the reserve was dropped for the present by the Chief Conservator. It is proposed to take up the question of introducing the Forest village system in the district. In *Anantapur*, the incidence of grazing was one cow unit for 4·06 acres against one cow unit for 0·94 acre of the previous year. The Collector remarks on this as follows: "I found on examining the figures that 0·94 acre reported as the cow unit in the district last year was a mistake and that the real cow unit was 2·01 acres. The mistake arose by dividing the *closed* area by the number of cow units grazed instead of dividing the *open* area by the number of cow units grazed. But even after comparing the present year's incidence with the real one for last year, there has been a most satisfactory improvement in the grazing incidence as the result of enhancement of grazing fees. It is clear that useless cattle are not now taken to reserves to be grazed. I recently heard complaints on the Demakethapalle side of the Hindupur taluk, that owing to the enhancement of the fee on sheep from 1 anna 6 pies per head to 4 annas, many graziers had to sell away their sheep and have been deprived of their livelihood. The remedy for this evil, if it exists, is to disafforest portions of reserves too close to villages. The matter may be looked into." In *Guntūr*, each cow unit got 4·02 acres against 3·42 acres of 1917–18 and 3·48 acres of 1916–17; this calculation of course includes steep hills and other inaccessible and ungrazable areas; it is therefore only a broad average obtained by dividing the whole acreage by the total number of cow units. In *North Cuddapah* the average incidence for the whole division is found to be 6·7 acres per cow unit. This is not excessive and the grazing possibility has not been exceeded. As a safeguard against excessive grazing, it has been ordered that all cattle living more than 5 miles from the reserved forests should be considered as foreign cattle and the grazing fees for such cattle should be Re. 1 per cow unit instead of the ordinary rate at 3 annas per cow. In *South Cuddapah*, the incidence of grazing is 7·5 acres per cow unit, the number of animals licensed being 30,948 cow units. In *West Cuddapah*, the incidence of grazing is 4·2 acres per cow unit against 5·9 acres in the previous year; in order to reduce the grazing incidence, the grazing fees for Sugali cattle and for cattle coming from villages beyond five miles from the reserve have been enhanced from 3 annas to Re. 1 and the closing of the plateau to grazing is under consideration. In *Chingleput*, the incidence of grazing was one cow unit for 2 acres generally except in Sriperumbudur and Sathiavedu ranges where the incidence was fixed at one cow unit for 4 acres and for one acre according to the nature of growth. In *Chittoor*, the grazing incidence is 3·7 acres per cow unit against 4 acres in the previous year.

76. An analysis of cattle impounded is given in Appendix B. The increase in the number of cattle impounded was due chiefly to the increase in the number of offences under unauthorized grazing involving a greater number of cattle.

*Southern Circle.*

77. About 76 per cent of the total areas of reserved forests and lands was opened to grazing of cattle but closed against goats. The incidence of grazing in the several districts of the circle is given below :—

| District. | Number of cattle in cow units. | Area in acres. | Number of acres per cow unit. |
|---|---|---|---|
| North Vellore .. .. .. | 44,238 | 238,080 | 5·38 |
| South do. .. .. .. | 59,701 | 230,187 | 3·86 |
| West do. .. .. .. | 53,883 | 203,410 | 3·78 |
| South Arcot .. .. .. | 51,326 | 126,419 | 2·46 |
| North Salem .. .. .. | 118,820 | 485,120 | 4·08 |
| South do. .. .. .. | 59,636 | 321,920 | 5·40 |
| Trichinopoly .. .. .. | 17,629 | 65,920 | 3·74 |
| Madura .. .. .. .. | 66,462 | 369,280 | 5·71 |
| Tinnevelly .. .. .. .. | 21,469 | 51,200 | 2·39 |
| Total .. | 493,164 | 2,091,536 | 4·24 |

(1 buffalo = 2 cows = 4 sheep.)

The number of cattle grazed shows a reduction of 99,728 animals since last year. The incidence of grazing has fallen from 3·61 to 4·24 acres per cow unit. As the incidence of grazing was high in *Trichinopoly*, proposals for enhancement of grazing fees have been received and are under consideration. The high incidence in *Tinnevelly* has not been explained. Steps are being taken to introduce the Hill Village System in *North Vellore* and *South Salem*. It is hoped that the gradual increase of grazing fees and the introduction of grazing schemes will reduce the incidence.

An analysis of the cattle impounded during the year with the average of three years is given in Appendix B. The increase was due to illicit grazing of foreign cattle in *South Vellore*, detection of cases of illicit grazing in closed areas in *Trichinopoly* and impounding of goats found browsing in *Madura* district.

*Western Circle.*

78. 76·7 per cent of the total area of the reserved forest and lands were opened to all animals, 5·2 per cent to all animals except sheep; and 18 per cent closed to all animals for the whole year and 1 per cent for part of the year.

79. *Incidence of grazing.—North Coimbatore* is the only division which reports what the incidence is, viz., from 5 to 6 acres per cow unit. In other divisions the incidence has been restricted to the possibility except in two forests in *South Mangalore*.

80. *Introduction of the Forest Village System.*—The scheme was sanctioned for the Udamalpet range of the *South Coimbatore*, and for the Thadagam reserve and Mettupalaiyam range of *Central Coimbatore*. The schemes prepared for the Talamalai range of *North Coimbatore* and Bolampatti range of *Central Coimbatore* await the Conservator's local inspection. The question of the introduction of the system in *North* and *South Mangalore* is pending consideration with the Collector. The number of cattle impounded was 11,484 against 7,351 in the previous year, and the average for the three years ending 1918–19 was 8,872. The increase occurred in Kollegal, North and Central Coimbatore.

(*d*) *Protection against injuries from natural causes.*

*Northern Circle.*

81. *Ganjām.*—Creepers were cut by the staff over 12,951 acres. Some dead and dying trees were removed to prevent insect and fungus attack. *Vizagapatam.*—Creepers were cut in 200 acres of sal forest by paid coolies. *Gōdāvari Upper.*—Nil. *Gōdāvari Lower.*—Creepers were cut by the staff on 25,870 acres. *Kistna.*—Nil. *Kurnool, East.*—Some creeper cutting was done in Gudem range by the staff. *Kurnool, South.*—Nil. *Kurnool, West.*—Creepers were cut by the staff over 250 acres of teak plantations in Pecheruvu range.

*Central Circle.*

82. *Bellary.*—In Adoni range, creeper cutting was done by the subordinates. *Guntūr*—the insect attack to casuarina growth in Nayanipalli plantation continued owing to the unhealthy growth of the trees due to the poor soil and lower level of

water strata. No damage was done to tree growth in the other ranges by natural causes. *North Cuddapah*—there have been sporadic attacks by caterpillars which defoliated *Anogeissus latifolia* trees in Nallamalais and in part of Chennupalli and Kalasapad reserves. These disappeared soon after there were some good showers; but in parts of Kalasapad reserve where there had not been good showers, the attack was rather severe and many trees were rendered leafless. No special steps were taken to eradicate the pest. *South Cuddapah*—a pest is reported to have been found causing damage to Thumba trees (*Shorea Tumbuggaia*) near Papanasanam and Mogilipenta. *West Cuddapah*—the usual creepers and soft wood species in the worked coupes were removed at the time of standard marking. *Nellore*—no special steps were taken to remove *Loranthus* growing on some *Grewia* and other inferior species. A caterpillar attacking *Anogeissus latifolia* was observed in the Ayyavaripalle reserve and a special report with specimens was sent to the Zoologist, Imperial Forest Research Institute, Dehra Dun, and his opinion is awaited. Owing to financial stress, removal of prickly-pear from coupes under working was not undertaken though there is a provision for its removal in the working plans. *Chingleput*—climbers and creepers in the felled coupes have been cut. *Euphorbia* in all coupes under working were cut by contractors. Prickly-pear was to a certain extent removed from the felled portions of No. 2 coupes of the six special working circles and the work is in progress. *Chittoor*, the cutting of creepers and climbers was carried out in the Mamandur coupes under working. Eradication of lantana over an area of 100 acres was done in Horsleykonda reserve at a cost of Rs. 155-4-0.

*Protection against injuries from natural causes.*

83. *Prickly-pear.*—Some progress was made during the year in getting rid of this pest. In *West Vellore*, it was cleared by subordinates wherever found. In *South Arcot*, Rs. 702 was spent in clearing an area of 637 acres in fuel forests. In *South Salem*, Rs. 2,908 was spent in clearing it in the Chitteri sandal working circle and four fuel coupes. In *Madura*, Rs. 1,029 was spent in removing the pest from 14 fuel coupes but it was found to be coming up again. It is difficult to see how any result can be arrived at as the fruit is eaten by men, monkeys, squirrels and birds and the seed scattered everywhere. It is extremely common outside the reserves. *Southern Circle.*

*Lantana.*—In *North Vellore* lantana was uprooted in two plantations and in *South Vellore* the pest was uprooted and burnt wherever found. In *West Vellore*, Rs. 1,128 was spent in uprootal over an area of 1,019 acres and about half the area has been cleared up to now. The work could not be pushed on faster as the Malayalis do not like the task and coolies from the plains will not stay on the hills on account of malaria and the scarcity of water. In *North Salem*, 671 acres were cleared in the Thalli reserve. In *Tinnevelly* small amounts were spent but the work was stopped as the cost was very high and as it was found that the Kattalamalai estate, a private property which was cleared of the pest repeatedly, was full of it.

*Parasitic pests.*—The teak leaf defoliators *Pyrausta machœralis* and *Hyblœar puera* were again at work in Banavaram and Palamady reserves but the damage was not extensive. In June last, another defoliator *Myllocenus subfasciatus* was at work on teak and red sanders in the Pichanur tope and on teak in the Palamady reserve.

*Creeper cutting.*—In *Tinnevelly* Rs. 608 were spent in creeper cutting and girdling in 600 acres of the sandalwood area in Alagarkoil valley, Rs. 168 in coupes III to VI of Kalakad working circle and Rs. 102 in different localities in the Ambasamudram Range. In addition Rs. 151 were spent in destroying a shrub called "Pulathi" over an area of 69½ acres in Kayamoli reserve. Similar work was done in 10 acres without cost by subordinates. This work requires extension in other districts, *Pterolobium*, *Zizyphus oenoplia* and some of the creeping *Acacias* make the forests almost impenetrable and prevent more valuable species growing.

Sambur (*Rusa*) do a lot of mischief in the teak coppice areas near Mundanthorai in the *Tinnevelly* district.

*Spike* (*Sandalwood*).—This subject is treated in detail under research work. The area in which the disease is found is increasing in *Trichinopoly* district.

*Western Circle.*

84. *Spike disease of sandal.*—The only work done was clearing lines 300 feet broad in *Kollegal* and *North Coimbatore* round areas infected by spike with a view to preventing the spread of the disease. The total length of lines cleared is considerable and though the Conservator has not yet had time to see any he understands that the clearing is seldom well done. The utility of the work on a large scale is therefore open to question and in future it will be carried out on a more experimental scale in a few easily accessible localities.

*Lantana.*—Eradication on a small scale was carried out in several divisions the total expenditure being Rs. 6,462.

*Prickly-pear.*—Rs. 17,904 was spent on eradicating or rather on vainly attempting to eradicate this pest. It was decided at the Conservators' Conference in June 1919 that no more money should be wasted on this Sisyphean task.

## 4. Sylviculture.

### (*a*) *Natural reproduction.*

*Northern Circle.*

85. *Ganjām.*—The year was normal for regeneration, but on shallow soils the drought killed many *Shorea robusta* coppice shoots. *Pterocarpus santalinus* seeded profusely in the Napier's Park reserve. *Vizagapatam.*—A rather poor year, due to drought, but good in the moisture parts inland. *Dendrocalamus* seeded widely, mostly in Golgonda range. *Gōdāvari Upper.*—Generally good. *Gōdāvari Lower.*—Good. *Kistna* and *Kurnool East.*—Poor. *Kurnool South.*—Bad. *Kurnool West.*—Good in closed areas on the Nallamalais. Particularly good in stone walled areas on the Yerramalais. Fair in open areas on the Nallamalais. Poor in open areas on the Yerramalais owing to heavy grazing.

*Central Circle.*

86. *Bellary.*—In Adoni Range, natural reproduction of *Dalbergia latifolia* and *Cassia fistula* is good in Adoni East and West reserves, so also *Cassia fistula* in Isivi and Ganekal reserves. The regeneration of *Melia indica* in Sulikeri, Peddakadabur, Kuppagal and Tungabhadra reserves is good. *Acacia Sundra* is fair in Adoni West and Ganekal reserves. *Hardwickia binata* reproduced itself fairly well in Kuppagal reserve under parent trees. Although *Hardwickia binata* reproduced itself very freely during the rains and large areas are found covered with newly-germinated seedlings, yet very few survive the hot weather; consequently the absence of saplings and poles are very marked. The reproduction of sandal is very marked especially in Adoni East and West reserves. The reproduction of Babul in Daroji is good. *Anantapur.*—The sandalwood trees which had established themselves in the Penukonda, Gundumala and Yerracherla reserves are confined to favourable localities and natural reproduction is observed in all of them. The Collector observes "That the climate of the district, especially, its southern half which is in the Mysore plateau is congenial to sandal growth, and in my opinion, the district will bear wider experiments in sandalwood culture. I mentioned this to the Conservator during his recent visit to the district and he seemed to agree with me." I endorse this. I think there are many places in Bellary, Anantapur and Chittoor where sandal can be advantageously introduced.

Natural regeneration of *Acacia Sundra, Dolichandrone crispa* and *Hardwickia binata* were observed in the reserves throughout the district. Coppice reproduction in the felled coupes of Illur reserve, continued to be satisfactory. The species coppiced was purely babul. *Guntūr.*—The regeneration of Yepi (*Hardwickia binata*) in the upland ranges was satisfactory as it seeded profusely. The reproduction of Billudu, *Anogeissus* and Nallaregu was fair in the Vinukonda range while it was rather poor in the Sattenapalle range. The regeneration of coppice was fair in all the felled coupes. The reproduction of Mada (*Avicennia officinalis*) by seed and the regeneration of Thilla (*Excœcaria agallocha*) and Kalinga (*Sonneratia Apetala*) by coppice were successful in the Bapatla range as in 1918. *North Cuddapah.*—Reproduction by coppice of *Anogeissus latifolia, Pterocarpus santalinus* and *Hardwickia binata* is generally good in all the felled coupes. The natural regeneration from seed of the principal species such as *Pterocarpus santalinus* and *Anogeissus latifolia* was fair in Nallamalais but was not so good in the Veligondas and Lankamalais. *South Cuddapah.*—Reproduction of Red Sanders, Billu and other important

species by seed was on the whole fair, taking into consideration the bad seed year and scanty south-west monsoon. Seedlings of Red sanders, Billu, Yelama, Yepi, Rosewood and Thamba, in improvement felling series were tended during the year on a more extensive scale than in the previous years. A good percentage of tended seedlings died back in the hot weather but many of these again sprouted after the advent of the south-west monsoon. Reproduction by seed of sandalwood in the Kodur plantation and in the Seshachellam reserve adjoining Mogilipenta was good. Reproduction by coppice was as usual very good. *West Cuddapah.*—In all the ranges, the reproduction by coppice shoots of Red sanders, Neeruddi, Yelama and Billu was good while the reproduction by seed was checked by fire and failure of rain. In areas not affected by fire the reproduction by seed of Red sanders, Neeruddi and Billu was fair. In Idupulapaya Palmyra plantation the reproduction by seed was excellent. Damage by wild animals was slight and could not be prevented.

*Nellore.*—*Eugenia Jambolana*, *Memecylon angustifolium*, *Glycosmis pentaphylla* *Pterospermum suberifolium*, *Mimusops hexandra*, and *Albizzia amara*, threw out good coppice shoots in Sriharikota island. *Soymida febrifuga*, *Bauhinia racemosa* and *Grewia latifolia*, coppiced well on the main land. *Strychnos nux-vomica* seeded poorly during the year. *Chingleput.*—Coppice reproduction in all felled coupes was very good. In the plain forests of Chingleput and Sriperumbudur ranges reproduction by seed was satisfactory especially in the case of *Zizyphus xylopyra*, *Dodonaea viscosa* and *Buchanania latifolia*. In Sathiavedu range, regeneration of *Eugenia jambolana* especially in the valleys and *Shorea tumbuggaia*, *Dillenia pentagyna* and *Terminalia chebula* on the plateau of Kambakkam was excellent. *Chittoor.*—Reproduction from seed of the better species in the Mamandur timber working circles was not satisfactory. This was probably due to too dense a cover of grass and weeds. Experiments were made to find out whether the burning of grass, etc., helped the regeneration of *Pterocarpus santalinus*. The following species were observed to seed abundantly during the year. *Pterocarpus santalinus*, *Santalum album*, *Anogeissus latifolia*, *Terminalia tomentosa*, *Terminalia Arjuna*, *Cassia marginata*, *Chickrassia tabularis*, *Hardwickia binata* and *Chloroxylon swietenia*. Coppice reproduction was most encouraging in all the working circles of the Panapakkam and Mungilpatti reserves recently inspected by the District Forest Officer.

87. *Sandal.*—The natural reproduction of sandal generally was not as good as in the previous year on account of failure of rains and prolonged hot weather. In *South Vellore* many seedlings are found on the Javadis and the species is spreading fast in Valasamalai. In the Palar river side plantations, in *North Vellore*, on the Pachamalais and Kollimalais in *Trichinopoly* and in the hill reserves of Kallakurchi range in *South Arcot* the spread is gradual. Regeneration was as usual good in the Kuttalam range and Alagarkoil valley in *Tinnevelly*. The seedlings in the Unjalnachi reserve, Sirumalai Southern slopes and in Ulkombai in *Madura* continue to thrive. *Southern Circle.*

In *North Vellore*, reproduction of teak and other timber species was not satisfactory on account of drought. *Albizzia amara* and *Atalantia monophylla* seeded well during the year.

*South Vellore.*—The reproduction of *Hardwickia binata* in the Pavunjipattu reserve and satin-wood in Santavasal range was on the whole satisfactory. *Dalbergia latifolia* was found to come up well in parts of the outer slopes of the Javadis in burnt areas.

*West Vellore.*—Scattered seedlings of *Pterocarpus marsupium*, *Dalbergia latifolia*, *Anogeissus latifolia* and teak were again found where the species are fairly represented but all of them suffered as in the previous year from the prolonged hot weather. Coppice reproduction in the felled coupes was fair.

*South Arcot.*—Natural reproduction of *Albizzia amara* was good throughout the district. Coppice reproduction was generally fair in all felled coupes closed to grazing. Satin-wood and *Eugenia Jambolana* were found to come up well in certain reserves.

*North Salem.*—The regeneration of *Hardwickia binata* along the banks of the Cauvery and Anabiddahalla was very satisfactory and encouraging.

*South Salem.*—The prolonged drought between July and October 1918 resulted in the seedlings of the year being killed off.

*Trichinopoly.*—The natural reproduction of *Dalbergia latifolia*, *Pterocarpus marsupium*, *Anogeissus latifolia* and *Albizzia odoratissima* was fair on the Kollimalais.

*Madura.*—Coppice reproduction in the felled coupes was satisfactory.

*Tinnevelly.*—The reproduction of *Balanocarpus utilis*, *Nephelium longana* and *Filicium decipiens* continued to be good but that of *Hardwickia binata* was again bad during the year. In some of the teak coppice areas the seedling regeneration was very good. 1918 was a good seed year for *Balanocarpus utilis* but it looks as if 1919 would be a bad one. 1918 was a bad year for *Gluta* but 1919 was good. It was found that *Acacia arabica* and *Acacia planifrons* subjected to coppicing and trimming of stumps produced no coppice shoots capable of living and more than 99 per cent of the regeneration was found to be natural. Wherever *Pteroearpus marsupium* grows regeneration has been found abundant.

### Bamboos.

In *North Vellore*, *Dendrocalamus strictus* flowered in Shanankuppam and Thellai reserves. In West Vellore *Rambusa arundinacea* and *Dendrocalamus strictus* flowered over large areas on the Javadis. In *North Salem*, there was gregarious seeding of bamboos over a major portion of Denkanikota range—the flowering here first began in 1916—and along the outer slopes of the Shevaroys. In *Trichinopoly*, *Bambusa arundinacea* flowered gregariously in two reserves—it flowered here before in 1898—and sporadically in the Namakkal range.

*Western Circle.*

88. In *North* and *South Mangalore* the season is reported to have been a bad one for the seeding of *Hopea*, in *South Coimbatore* the District Forest Officer reports having noticed *Pterocarpus marsupium* and *Dalbergia* seedlings in large numbers and in *South Malabar* natural reproduction of teak was plentiful in the clear felled plantations, and the seedlings were utilized for "supplying" vacancies. Practically nothing has been reported from other divisions regarding seeding of any timber trees. The District Forest Officer, Central Coimbatore, however reports that seedlings of *Pterocarpus marsupium* in the Chinnar forests are "splendid."

### (*b*) *Artificial reproduction.*

*Northern Circle.*

89. *Regular plantations.*—No extensions were made.

90. *Cultural operations.*—Nothing worthy of special mention was undertaken during the year. Small areas artificially sown, in particular with *Cassia auriculata*, *Santalum album*, *Pterocarpus santalinus*, but results obtained were poor in all cases owing to the failure of the monsoon. However in *Gōdāvari Lower*, 50 acres ploughed and sown with *Cassia auriculata* are reported to be doing well, as are the sandalwood dibblings in the Kondapalli reserve in the *Kistna* district. Small dibblings of sandal and red sanders were successfully carried out in various places in *Ganjām* district. In *Ganjām*, an attempt was made to start the Taungya system 1·7 acres being cleared and sown with field crops and red sanders. So far it is successful. Famine prevented further operations.

The Vernacular Training School made numerous experiments. Details are given in Form 75.

*Central Circle.*

91. Form No. 75 shows the area under artificial reproduction.

92. *Regular plantations.*—There were no new plantations added; but 208 acres in Guntūr were sold and 108 acres in South Cuddapah disafforested and these were excluded. In *Bellary*, no fresh planting was undertaken in the Moka plantation during the year. The crop which consists chiefly of casuarina, sissoo, *Albizzia lebbek*, Tamarind, *Melia inidca*, *Pithecolobium dulce* and *Pongamia glabra*, have attained to a height of from 15 to 50 feet and the girth ranges from $1\frac{1}{2}$ to $3\frac{1}{2}$ feet. Dead trees of casuarina and sissoo were felled and disposed of during the year. In *South Cuddapah* out of the 500 red sanders seedlings transplanted from a nursery two years back in the recleared area of the Kodur red Sanders plantation during 1916, only 110 plants were surviving and these have been watered by the plantation watchers for

the last two years. Kanuga, vepa, etc., seedlings planted up round the Balapalle and Mogilipenta bungalows are doing well.

*Nellore.*—Casuarina plantings were given up altogether and the existing plantations are being sold with the land piecemeal year after year.

93. *Cultural operations—Bellary.*—The experimental sowings of tangedu and *Hardwickia binata* over small plots were carried out. *Anantapur*—cultural operations for the spread of sandal were carried out over an area of 258 acres by dibbling seeds and freeing existing trees of creepers, etc., at a cost of Rs. 57-10-0 and except the area operated on in Amagondapalayam reserve they proved successful. The Collector remarks: "This strengthens my observation". Tangedu seeds were sown in furrows two feet apart in three reserves covering an area of 167 acres. The sowing owing to unfavourable weather conditions, was conducted late in the year and the few that germinated have subsequently died out. It remains to be seen if further germination would take place this year after the rains. *Guntūr.*—Scarcity of rain was very great during the year and it accounted for the failure of almost all cultural operations. Six hundred acres of Muttayapalem and Kondavid reserves were sown with tangedu seeds but only 20 per cent of the seed germinated on the whole, while probably three-fourths of those which did germinate, succumbed later on for want of moisture. Two plots were selected in Bollapalli reserve, and one in coupe 4 of Venkatayapalem reserve extension I for sowing sandalwood seeds; there was no germination in any of them owing to insufficient rain. One hundred seers of vepa, dirsinam and babul and 2,500 palmyra seeds were dibbled in compartment II of Tekkallapad reserve free of cost by subordinates but the operation was unsuccessful for want of rain and also on account of the saline nature of the soil. *North Cuddapah.*—Four hundred palmyra seeds were sown in Rameswaram reserve of Vonipenta range and their germination was fairly successful; of the seedlings of 1917-18, about 50 per cent are thriving and are 2 to 3 feet high.

*Tangedu sowing.*—In Sidhout range, 26 acres were sown broadcast with seed at a cost of Rs. 62 near Kondur resthouse and the result was very encouraging, the seedlings are thriving well; in Vonipenta range over 50 acres in Kancherlamoram reserve and over 30 acres in Vedurur and Rameswaram reserves were sown broadcast and also in lines at a cost of Rs. 130 in all. The results were encouraging except in Vedurur and Rameswaram reserves where owing to the sandy nature of the soil the seeds did not germinate well. In Nallamalais and Veligondas of Porumamilla range about 56 acres were sown at a cost of Rs. 108-10-0. The regeneration was fair and the seedlings were reported to be thriving. In Badvel range seeds were sown broadcast in the Lankamalais and Veligondas, over 17 acres at a cost of Rs. 81-8-0, but the results were not encouraging. It is proposed to extend the experiment in contiguous areas in all ranges except Badvel for 1919-20. Seedlings of mango, Dirsinam and *Erithrina indica* in the rest-house compound of Brahmanapalle Mallemkonda and range quarters of Badvel range were thriving well. In Vonipenta range, seedlings of neem red sanders and sandalwood were doing well in the compounds of Bainapalle and Kothapalle rest-houses. In Porumamilla range some plants, namely, Yepi and Kanuga, were introduced in Venkatapuram tope and the seedlings were reported to be thriving. An experiment on concentrated regeneration of red sanders by dibbling in patches was tried in the Porumamilla range office compound but it proved unsuccessful; in its place *Albizzia lebbek* was tried during the year and the result appeared to be promising. *South Cuddapah.*—In Chitvel range, tangedu sowings were carried on in five methods in five plots of one acre each. Though the germination was profuse in all the plots the seedlings were damaged by insects. The tangedu cultural operations in this district cannot be taken up on an extensive scale in the reserves. Most of the reserved forests are hilly. Sandalwood seeds were dibbled in coupe V of Ṭhunukonda fuel working circle over an area of 2 acres in September 1913; 431 seedlings are now surviving. the same operation was carried out at Relamidipenta in Seshachellams of Kodur range; no seedlings sprouted. The seeds have been reported to have been eaten by rats. Eighteen seers of sandalwood seeds were sown in the Seshachellam plateau of Rajampet range. The germination has not been satisfactory. In Salivendla reserve of Chitvel range sandalwood seeds were dibbled in an area of 5 acres. The seedlings that had come up were found to be $4\frac{1}{2}$ inches in height on an average. *West*

*Cuddapah.*—Tangedu seeds have been sown and are thriving well in parts. *Nellore.*—Sandal seeds were dibbled in small selected areas of all ranges and the percentage of success is about 40 per cent in all except Udayagiri and Nellore ranges. There are about half a dozen seedlings 3 to 4 feet in height under *Memecylon Angustifolium* in Sriharikota. Tangedu seeds were sown in an area of 584 acres in the closed areas of different reserves of the Kāvali and Nellore ranges at a cost of Rs. 1,200. The germination is good in most of the areas. Seed sown on slopes was washed away and in a few places the seed has died for want of moisture. Seeds sown on (1) red soils formed by the disintegration of laterite, (2) on clayey loamy soils and (3) on areas the grass and growth on which were cut and burnt germinated profusely and are doing well, while those sown in sandy and saline soils and on grassy plots failed utterly. *Chingleput.*—Sandal seeds were sown on Kambakkam and Nagalapuram hills in 1,370 pits but on account of drought all but 59 died. These are now in a healthy condition and average about 6 inches in height. Last year's seedlings on Kambakkam hills, about 200 in number, and in Guindy Park reserve about 300 in number are in good condition with an average height of 15 inches. At the instance of the Conservator, seeds of *Pterocarpus marsupium* and *Santalinus*, *Anogeissus latifolia* and *Albizzia amara* were dibbled in the felled coupes and in the hill areas. In most cases the seeds did not even germinate, and in some cases the seedlings did not thrive on account of the failure of monsoon. According to the provisions of the working plan seedlings of indigenous timber species such as *Melia indica*, *Bassia latifolia*, *Eugenia jambolana*, *Albizzia lebbek* and *Tamarindus indica* were planted in the five special working circles over 242 acres. About 25 per cent of them are successful. This kind of operation was also conducted in the compounds of bungalows at Kadapperi, Avadi and Thiruporur under Board's orders. Sowings and dibblings of avaram were done in 180 acres of Srīperumbudūr range, 23 acres of Sathiavedu range and 5 acres of shrotriyam Pulikutti village of Saidapet taluk. The operation was a distinct success in all the reserves. *Chittoor.*—One hundred and fourteen acres in four ranges were sown with *Cassia auriculata* seeds after ploughing. The result was very gratifying in 25 acres of Panapakkam reserve, and fairly satisfactory in 50 acres (Nagapatla reserve), in the remaining 39 acres it was a failure due probably to bad season. Red sanders seeds were dibbled over an area of 40 acres in the Chittoor reserve and sandal seeds over an area of 529 acres in all the ranges. The seeds were dibbled in previously felled coupes which are fenced and closed to grazing. The practice adopted was to sow three seeds close together in thumb-holes at intervals of about 20 feet under shelter of bushy growth. The results, however, were not at all satisfactory owing to drought.

***Southern Circle.***

94. *Regular plantations—North Vellore.*—Blank areas aggregating 17 acres were planted up with rosewood and *Hardwickia binata* in the Kilminnal, Virinjipuram and Tiruvallam working circles under the provisions of the working plan, red sanders and *Hardwickia* were dibbled on mounds in 26 acres of Chenur working circle, but there was no germination owing to drought.

*South Vellore.*—During the year the Amerdi plantation was transferred to this division from North Vellore. An area of 10 acres cleared last year was planted in groups with teak, sissoo, red sanders and rosewood. The results were unsatisfactory owing partly to the unfavourable season and partly to planting having been done too late. Sissoo did best. For planting during the current year, an area of 21 acres has been selected and cleared of growth. Pits for planting have been dug. Weeding and replacing of casualties were carried out in the older plantations.

*Madura.*—No addition was made during the year. In the two small teak plantations of Velankombai and Vannathiparai the growth of teak was excellent. As it was found that thinning was necessary selected trees were marked and sold. It is proposed to extend the Vannathiparai plantation and an estimate for planting 50 acres has recently been sanctioned. Blue gum trees in Gundanshola continue to do well. In the pine plantations, *Pinus insignis* thrives very well and the growth of *Pinus attenuata* and *Pinus maritima* is fair. Steps are being taken to plant 100 acres in Gundar catchment area with *Acacia decurrens*.

*Tinnevelly.*—Rs. 325 was spent in the Kodamadi teak plantation. Two and a half acres were added during the year. The plantation is doing well. One lakh

twenty-one thousand palmyra nuts were dibbled in blank areas in compartments of the Teri reserve at a cost of Rs. 254 and 75 per cent of them are reported to have germinated. This reserve originally about 20 square miles of drifting sand is of special interest to a Forest officer.

95. *Taungya—South Vellore.*—An attempt was made at raising teak along with an agricultural crop over an area of 10 acres in the Amerdi plantation. The pitting and planting work was done by the department and tending of the plants and keeping the area free from weeds were entrusted to a cultivator in return for the right to grow field crops. It is found that bisons damage the plants to a considerable extent.

*South Arcot.*—In addition to the two acres already existing in the Pakkam reserve another plot of two acres were planted up with teak. One thousand six hundred and five seedlings are reported to have been existing in the two bits at the end of the year, so the result is not very promising.

96. *Cultural operations—South and West Vellore.*—The cultural operations prescribed in the working plan were carried out and sandal seeds were extensively dibbled in the special tending areas of coupes I to III of the several felling series. Sowings were carried out amidst bushes having no sandalwood. The system of inducing the reproduction by scratching the soil under the healthy sandal trees and fencing round them was continued but results are not very evident. The past sowings in the special tending areas in *South Vellore* in coupe I of Komattiyeri in particular, were more satisfactory and the seedlings are well established. Steps were taken in *South Vellore* to induce natural regeneration from root suckers in the special tending areas in each coupe and the result has been very satisfactory so far; it remains to be seen if the suckers will form trees.

*South Arcot.*—Fifteen acres sown broadcast with teak in Pakkam reserve in 1917 proved a complete failure. The seeds of teak, sandal and red sanders sown broadcast during this year over a total area of 95 acres have given poor results owing to the want of rain. One hundred and eighty-two measures of avaram seed (*Cassia auriculata*) were sown as an experiment in ploughed furrows but the seedlings died in the hot weather.

*North Salem.*—Fifty-one measures of sandal were sown in blanks of coupes I in the felling series of Denkanikota and Anchetti ranges. The result was fair in the Denkanikota range but a failure elsewhere.

*South Salem.*—Sandal seeds were sown in blanks in coupes I and II of compartments 1 and 2 of the Chitteris working circle in accordance with the provisions of the working plan. Forty per cent of the seed sown is reported to have germinated. A considerable quantity of the sandal and other timber species and also of *Cassia auriculata* was put out elsewhere but though the germination was generally fair the seedlings except some *Cassia* did not survive the hot weather.

*Trichinopoly.*—The operations carried out during the year with sandal and red sanders proved a failure on account of the paucity of rains.

*Tinnevelly.*—Seven hundred and seventy-one measures of seed of *Balanocarpus utilis* were dibbled in four places in the Ambasamudram range. The dibbling in some cases has been quite successful and it is proposed to extend the successful patches during the current year. To prevent destruction by pig, the seeds were coated with red lead, this had an excellent effect and is one reason for getting much better results during the year. Forty-two and a half bags of *Acacia planifrons* pods were collected and sown by subordinates in the Tinnevelly range. *Hopea parviflora* and *Gluta* put out at Kannikatti in the previous years are healthy but the growth is very slow.

97. *Regular plantations.*—During the year, 71 acres of mature teak plantations and 90 acres of natural forests were clear-felled in *South Malabar* and partly planted with teak at a cost of Rs. 6,402. Planting in the 70 acres of mature plantation and 46½ acres of natural forests clear-felled in 1917–18, was completed during the year. In the latter area the sowing of *Terminalia tomentosa*, *Terminalia paniculata and Bombax malabaricum* seeds in 1918 failed and the sown area was planted with seedlings of the same species. The result was a practical failure, as regards Bombax only about 120 out of 2,600 seedlings surviving. Of the other species 50 per cent

*Western Circle*

succeeded. In *the Nilgiris* the three experimental Eucalyptus plantations of 137 acres were maintained, the cost to the end of the year being Rs. 16,005. Four compartments (area not given) in Bandyshola Acacia Working Circle were planted but the District Forest Officer has not stated with what species. In *Central Coimbatore* Teak and Divi-Divi were planted in alternate lines in 43 acres of Chenat Nayar and adjoining forests and 75 per cent of the seedlings were thriving at the end of the year.

98. *Taungyas.*—In *North Malabar* which is the only division in which this method of re-generation is at all a regular institution, 20 acres were partly dibbled and partly planted with teak. The 13 acres in *The Nilgiris* (near Benne) sown in 1917 and reported last year to be a failure were re-sown in April—May and when seen by the Conservator in August appeared promising.

99. *Cultural operations.*—In *North Mangalore* the District Forest Officer reports that sowings of Hopea, *Artocarpus*, and *Terminalia tomentosa* and "other species" were carried out, but does not say what the other species were, nor does he give any details regarding locality or area. Two hundred and twenty-five acres were sown with sandal seed but nothing is stated as to the result. In *South Mangalore* a few thousand *Hopea* seedlings were planted in the rains of 1918, 50 per cent of them surviving the 1919 hot weather. In *North Malabar* 38 acres of jungle were cleared in patches of one acre in extent and sown with teak in the hot weather of 1919. Some sowing of sandal seed was done in Kollegal, the result being reported 'fairly satisfactory.'

In *North Coimbatore* 60 acres were dibbled with sandal seed near Dimbam. The Conservator has recently inspected the work; the results are distinctly promising, and with proper attention to the opening of the canopy to admit sufficient light to the seedlings, a work hitherto not undertaken, it should be possible to raise very valuable plantations in this locality which is as yet free from spike. In *Central Coimbatore* 41 acres were dibbled with sandal and the result is reported to be fair.

About 165 acres were sown with seed of avaram (*Cassia auriculata*) in *North Coimbatore*, 10 acres in *the Nilgiris* and 529 acres in *Central Coimbatore*, but practically no germination resulted. In *South Coimbatore* under the prescriptions of the recently sanctioned working plan for the Tekkadi Leased and Mount Stuart forests, 25 acres were clear-felled and sown with teak seed with an espacement of 3′ × 3′. Owing to the absence of the usual showers in April and May and possibly also to the use of bad seed, germination was not very satisfactory.

(*c*) *Operations for the improvement of the growing stock.*

*Northern Circle.*

100. Nothing was done.

*Central Circle.*

101. *Timber improvement fellings.*—*North Cuddapah*, 437 acres, *South Cuddapah*, 1,657 acres, *West Cuddapah*, 1,699 acres, *Chittoor*, 281 acres were felled under this system.

*Coppice felling.*—Continued to be carried out in all the districts of the circle for supply of firewood.

*Fencing* of all felled coupes was as usual carried out by contractors. In *Nellore* and *Chingleput* felled coupes were fenced with trench and mound departmentally, the latter being planted with aloes where the outer coupe boundaries coincided with the reserve boundary itself.

*Cutting of creepers and climbers*—Was carried out in all the districts except Anantapur and Guntūr.

*Stone walling*—Was done in *Guntūr*, *North Cuddapah*, *South Cuddapah*, *West Cuddapah* and *Chittoor* districts.

*Southern Circle.*

102. The cutting of creepers affecting standards and other useful trees was, as usual, carried out by subordinates in most districts and felled coupes were fenced by the contractors. The matter of creeper-cutting has been referred to also under the heading 'protection against injuries from natural causes.' In the sandalwood area, tending and fencing operations prescribed in the working plans were carried out. The thinning of *Albizzia amara* in the felled coupes of 1917–18 in the Sholavandan range prescribed in the *Madura* fuel working-plan was undertaken during the year; it is early yet to judge of results.

103. Light improvement fellings for *Hopea* and sandal were carried out over 664 acres in *North Mangalore* and over 4,740 acres in *South Mangalore*. Thinnings were carried out as usual in the Nilambur plantations, over a small area of teak plantations in *North Malabar* and *the Nilgiris* and in 14 acres of Eucalyptus high forest in the latter division. In *South Malabar* parasites (*Loranthus sp.*) were pruned in 822 acres of the Nilambur teak plantations, and climbers were cut in the plantations, marked for thinning and in those cleared of parasites. Improvement fellings were continued in the Mudumalai forest in *the Nilgiris*, 1,234 acres being worked over. *Western Circle.*

## 5. Exploitation.

### (a) *System of management.*

104. The various sylvicultural systems in force over the areas under sanctioned working plans as reported by District Forest Officers, are summarised below :— *Northern Circle.*

| Sylvicultural system. | Area in square miles. | Percentage. |
|---|---|---|
| (1) Method of clear-felling ... ... ... ... | 20 | 00·73 |
| (2) Selection fellings ... ... ... ... ... | 277 | 10·12 |
| (3) Simple coppice ... ... ... ... ... | 336 | 12·27 |
| (4) Coppice with standards ... ... ... ... | 75 | 2·74 |
| (5) Method of improvement felling ... ... ... | 337 | 12·31 |
| (6) Area for which working-plans have been prepared but not subjected to any definite system of working ... ... ... ... ... ... ... | 1,693 | 61·83 |
| Total ... | 2,738 | 100·00 |

### (i) Major Forest Produce

#### (1) *Clear or regeneration fellings.*

105. Thirty-eight acres of compartment 9 of Kandikuppa plantation in *Gōdāvari Lower*, two coupes covering 554 acres in *Kistna*, and six miles of fire lines in *Kurnool South* were clear-felled.

#### (2) *Selection fellings.*

106. *Ganjām.*—Twenty sal trees of over 7½ feet in girth were extracted from Rambha reserved forest. Trees of 4½ feet in girth and upwards from unreserved lands and 634 trees from reserved forests were felled for supply of sleepers and building materials. *Gōdāvari Upper.*—Two thousand and seventy-seven logs which yielded about 35 thousands of cubic feet were felled from the unreserved lands in Bhadrachalam, Nugur and Cherla ranges. *Kurnool South.*—Three hundred mature palmyra trees were removed in Owk and Giddalore ranges.

#### (3) *Simple coppice.*

107. Twenty-six coupes with an area of 1,090 acres were worked in *Ganjām*, 20 coupes comprising 3,314 acres in *Gōdāvari Lower*, and fifteen coupes of 10,868 acres in *Kistna*.

#### (4) *Coppice with standards.*

108. Fifteen fuel coupes with an extent of 398 acres in *Vizagapatam*, two (189 acres) in *Kistna*, one coupe of 50 acres in *Kurnool East*, ten coupes (1,664 acres) in *Kurnool South* and three (332 acres) in *Kurnool West* were felled.

#### (5) *Improvement fellings.*

109. *Ganjām.*—Two hundred and twenty-six dead sāl trees were removed. *Vizagapatam.*—The windfallen and top-broken sāl trees in Donabai, Burna extension and Samarelli forests were extracted. *Gōdāvari Lower.*—Compartment 10 of Kandikuppa plantation was thinned. Deadwood which yielded 9,558 cubic feet of fuel and 600 head-loads of brushwood were collected from compartments 10 to 14 of the same plantation. *Kurnool South.*—Over-mature trees were felled in five coupes covering 6,914 acres.

#### (6) *Unregulated fellings.*

110. These fellings were confined to the unreserved lands in all districts including the Rampa forests in *Gōdāvari Lower* and to the removal of palmyra trees in *Kurnool West*.

*Central Circle.*

111. The total extent under working plans was 911 square miles and the various sylvicultural systems in force are shown below :—

| Sylvicultural system. | Area in square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| (1) Method of clear felling by compartment ... ... | 5 | 0·55 |
| (2) Simple coppice ... ... ... ... ... ... | 1 | 0·11 |
| (3) Coppice with standards ... ... ... ... ... | 133 | 14·60 |
| (4) Improvement fellings ... ... ... ... ... | 287 | 31·50 |
| (5) Area closed to felling or worked under no definite sylvicultural system ... ... ... ... ... | 485 | 53·24 |
| Total ... | 911 | 100·00 |

(1) *Clear or regeneration fellings and* (2) *Simple coppice.*

112. One hundred and twenty-three acres in Adoni range and Daroji coupe of Bellary district and 50 acres of Coupe VI of Tadipalli reserve of Guntūr district were clear felled. One coupe in Chamala range of Chittoor district and two coupes in Anantapur district were worked under simple coppice system.

(3) *Selection fellings.*

113. Fifty-six palmyra trees in compartment 2 (106 acres) of Takkellapad reserve of *Guntūr* district and all the bamboo blocks in *West Cuddapah* district were worked under this head.

(4) & (5) *Improvement and coppice with standard fellings.*

114. *Improvement fellings—Anantapur.*—The working plan provided for improvement fellings by the removal of deadwood and felling of useless species, but the prescriptions have not been carried out for some years and the sanction of the Board was obtained for the deletion of these prescriptions in Board's Proceedings Forest Mis. No. 116, dated 14th February 1919. *North Cuddapah.*—273 acres of Lankamalais and 164 acres of Nallamalais of Vonipenta range were worked under the method of improvement fellings. Fifteen coupes covering an area of 1,657 acres in *South Cuddapah*, 14 coupes covering an area of 1,699 acres in *West Cuddapah* division and 3 coupes of 281 acres in *Chittoor* district were worked under this system.

*Coppice under standard system.*—The following coupes were worked under coppice with standards, 24 coupes of 2,365 acres in *Bellary*, 19 coupes of 1,594 acres in *Guntūr*, 14 coupes of 1,253 acres in *North Cuddapah*, 7 coupes of 755 acres in *West Cuddapah*, 49 coupes of 4,121 acres and an area of 82 acres of casuarina coupes in *Nellore*, 15 coupes of 315 acres in *Chingleput* and 12 coupes in *Chittoor* district.

(6) *Unregulated fellings.*

115. No unregulated fellings were allowed. *North and West Cuddapah.*—When timber was allowed to be removed by free grantees a plot was selected and trees required to be felled were marked and hammer-marked under the principles of improvement fellings.

*Southern Circle.*

116. The total area of forests under working plans was 2,809 square miles. The various sylvicultural systems in force are shown in the following table :—

| Sylvicultural system. | Area in square miles. | Per cent. |
|---|---|---|
| Simple coppice ... ... ... ... ... | 334 | 11·89 |
| Selection felling ... ... ... ... ... | 399 | 14·21 |
| Improvement felling ... ... ... ... | 354 | 12·60 |
| Coppice with standards ... ... ... ... | 1,246 | 44·36 |
| Pastoral methods ... ... ... ... ... | 106 | 3·77 |
| Forests for which working plans have been prepared but not subjected to any definite working. | 370 | 13·17 |
| Total ... | 2,809 | 100·00 |

(1) *Simple coppice.*

117. Under this system a coupe of 123 acres in *North Vellore*, 12 fuel coupes of 490 acres in *South Vellore*, 273 acres in *North Salem* and 6 fuel coupes in *South Salem* were worked. For most of these the system prescribed is coppice with standard, but on account of want of trees fit for standards simple coppicing was done. In *Madura*, simple coppice system was enforced in Sholavandan, Natham and Ayyalur ranges as per prescriptions of the revised working plan and also in Kodaikānal and Palni ranges.

The standing growth on the Kappalur reserve in *South Vellore* was clear felled with a view to its disafforestation.

(2) *Selection fellings.*

118. All the bamboo areas were felled under this system. One thousand seven hundred and thirteen selected sandalwood trees dead and dying on the Pachamalais and Kollimalais in *Trichinopoly* district were felled under the system. This would come more appropriately into the next paragraph.

(3) *Improvement fellings.*

119. Four coupes in *North Vellore* with an area of 152 acres and all sandal coupes in *South* and *West Vellore* and *North* and *South Salem* were worked under the system. Under the five years' scheme an area of 50 acres in Takarai Hill timber working circle was worked under the system in *South Arcot* district.

(4) *Coppice with standards.*

120. The following coupes were worked under this system :—

20 fuel coupes of 1,820 acres in *North Vellore.*
23 fuel coupes of 946 acres in *South Vellore.*
5 fuel coupes of 353 acres in *West Vellore.*
18 fuel coupes of 1,094 acres in *South Arcot.*
8 coupes of 1,424 acres in *North Salem.*
3 fuel coupes of 373 acres in *South Salem.*
9 fuel coupes of 516 acres in *Trichinopoly.*
49 fuel coupes of 3,046 acres in *Madura.*
and 16 ghaut forest coupes, 1 plain forest coupe and 7 tank-beds in *Tinnevelly.*

(5) *Unregulated fellings.*

121. Unregulated fellings under the permit system were confined to unreserves under the management of the Revenue Department.

122. The total area of forests under working plans is 1,854 square miles. The several sylvicultural systems in force in this area are *Western Circle.*

| Sylvicultural system. | Area in square miles. | Percentage of total area under each sylvicultural system. |
|---|---|---|
| Method of clear fellings by compartments ... ... | 10 | ·54 |
| Selection method ... ... ... ... ... | 267 | 14·40 |
| Simple coppice ... ... ... ... ... | 73 | 3·94 |
| Coppice with standards ... ... ... ... | 200 | 10·79 |
| Method of improvement fellings ... ... ... | 140 | 7·55 |
| Unregulated fellings ... ... ... ... ... | ... | ... |
| Forests for which working plans have been prepared but not subjected to any definite system of working. | 1,164 | 62·78 |
| Total .. | 1,854 | 100·00 |

(1) *Clear fellings.*

123. In *South Malabar* 100 acres of natural forest and 71 acres of teak plantation were clear felled for replanting with teak.

(2) *Selection fellings.*

124. These fellings were carried out over an area of about 2,305 acres in *North Mangalore*, *South Mangalore*, *North Malabar* and *South Coimbatore.*

(3) *Simple coppice.*

125. 49·21 acres of Eucalyptus and Acacia plantations in the *Nilgiris* were felled for the supply of firewood.

(4) *Coppice with standards.*

126. Five thousand and eight acres were felled in the four *Coimbatore* divisions and the two *Mangalore* divisions.

(5) *Improvement fellings.*

127. Were conducted over 1,523 acres in *North* and *South Mangalore* and the *Nilgiris.*

(6) *Unregulated fellings.*

128. Were almost entirely confined to waste lands under the management of the Revenue Department.

(ii) MINOR FOREST PRODUCE.

(1) *Bamboos.*

*Northern Circle.*

129. The right to extract bamboos was generally leased out. The removals from the Rampa forests in *Gōdāvari Lower* and from the reserved forests of Bhadrachalam and Nugur taluks were regulated by the permit system. In parts of *Kurnool East* and in *Kurnool West*, the *Chenchus* were employed by the department in felling bamboos and preparing splits and the right to purchase the outturn at fixed rates was leased out.

(2) *Miscellaneous produce.*

130. In *Ganjām*, *Khonds* were allowed to remove minor produce from reserved forests *free* in return for the services rendered by them in general and fire protections. Permits were issued for collection of produce from Rampa forests and Yellavaram and Polavaram agencies in *Gōdāvari Lower*. The system of departmental collection which was introduced in *Gōdāvari Upper* having resulted in a loss was abolished. In *Kurnool East*, minor produce was collected departmentally by *Chenchu* labour. The important products elsewhere were, as usual, leased out.

*Tan stuffs.*—The collection of tanning materials was completely under the control of the Munitions Board. The department got credit for Rs. 21,621 based on the average receipts from the sales of such stuffs during the five years preceding the war. This arrangement resulted in a loss of about one and a quarter of *lakhs.* Bark and Sumac of *Anogeissus latifolia* were collected as requisitioned by the Controller of Tanning Stuffs. The bark of boles and twigs was collected on a large scale especially in the *Kurnools* departmentally and through contractors to comply with the special demand of the Controller for supply of about 2,000 candies. As the extraction was undertaken as a war measure without any previously laid out system, there were indiscriminate fellings throughout the forests which resulted in considerable damage.

(3) *Extraction of fodder.*

131. The removal of fodder and thatch grass in Coringa and Kandikuppa forests in *Gōdāvari Lower* and from closed areas in *Kistna* and of fodder leaves from the mangrove forests in the latter division was leased out. One hundred and fifty-two cart loads of fodder grass from the reserved forests in *Kurnool South* and 128 in *Kurnool West* were removed on permits on payment. There was no demand for cut fodder in *Gōdāvari Upper.*

*Free removal of fodder grass.*—The concession of free removal of grass from reserved forests was allowed in *Vizagapatam* and in the *Kurnools.* It was availed of on a large scale in the *Kurnools* owing to scarcity of fodder outside the forests. There was no necessity for allowing the concession in the other districts.

(4) *Hay-making.*

132. The Military Grass Farms Department manufactured hay in *Kistna* and the *Kurnools*, paying a royalty of Rs. 2 per ton. The outturn was 4,627 tons.

(5) *Grazing.*

133. Grazing was, as usual, regulated by issue of permits. The revenue derived from grazing was Rs. 1,14,071.

(1) *Miscellaneous produce.*

*Central Circle.*

134. Minor produce was leased out to contractors as usual in all the districts except in the Sriharikota range of *Nellore* district, where the produce (*Nux-vomica*,

rattans, soap-nuts, tamarind and sarasaparilla) continued to be collected and sold departmentally. The increased seigniorage rate of Rs. 2 for manure leaf reduced the demand to a certain extent in *Anantapur* and *West Cuddapah* districts. Permits continued to be issued for stone, earth and road materials.

(2) *Extraction of fodder.*

135. Fodder grass was extracted by the Military Grass Farms Department in *Bellary*, *Anantapur*, *Guntūr*, *North* and *South Cuddapah* and *Chittoor* at Rs. 2 per ton removed. The fodder grass in the babul areas of Guntur taluk was leased out to contractors and an amount of Rs. 4,111 was realised against Rs. 4,970 in the previous year. In Bellary Mr. Howes removed 1,041 tons against 800 tons in the previous year. In *Nellore* and *Chingleput* lessees of kanchas were given the privilege of removing fodder grass from the closed portions of their kanchas in return for the protection of the latter blocks and they were much benefited by the concession.

(3) *Free-removal of grass.*

136. The free removal of grass was allowed as usual in all districts except *Chingleput*, but the free removal was restricted in the three *Cuddapah* divisions to head loads only on account of hay required for supply to the military department. In *North Cuddapah* the concession was withdrawn in Veligondas of Badvel range as a punishment of large smuggling of timber.

(4) *Hay-making.*

137. No departmental hay operations were undertaken during the year except in *Guntūr* where about 124 tons of hay collected departmentally was supplied to the military and about Rs. 248 realized as a royalty at Rs. 2 per ton. The balance of hay (viz., 705 tons 1,115 lbs.) collected departmentally and remaining unremoved during the previous year was supplied to the military and 338 tons 646 lbs. of rejected hay was sold locally for Rs. 477.

(5) *Grazing.*

138. The revenue realised during the year was Rs. 3,47,929 against Rs 3,46,692 in the previous year.

The increase was due to larger areas of kanchas sold and higher rates realized in *Chingleput* and to enhancement of grazing fees 3 to 8 annas a cow unit in *Anantapur*.

In *Nellore* the kancha system which was extended throughout the district the Sriharikota reserve and casuarina plantation on the coast has taken a firm root and is appreciated by the villagers. The Extra Assistant Conservator and the District Forest Officer toured in the district and conducted the kancha sales early in March 1919. The system has worked satisfactorily during the year. Mr. Sathe wrote an interesting memorandum on the kancha system at the request of the Board of Revenue. Now that the system is established fairly well and some kanchadars have formed themselves into informal village panchayats, it is probably advisable to encourage such panchayats by leasing the kanchas to them at a fixed rate for a definite period say two or three years instead of putting them to auction and raising unhealthy competition. Some kanchadars stated that if they were given long leases at the minimum rates, they would undertake to remove prickly-pear and improve the water-supply in grazing grounds.

(1) *Miscellaneous produce.*

139. Minor produce was as a rule leased out. With a view to reduce the possibility of illicit fellings, departmental collection of minor produce was continued in Synagunta and Moidana reserves in *North Vellore*. The produce collected including that of the previous year was sold for Rs. 2,921. Deducting Rs. 163 the cost of collection, the net profit was Rs. 2,758. In the same district removal of manure leaves on permits was prohibited during the year. *Southern Circle.*

(2) *Tan stuffs.*

140. The right of collection of the barks of *Cassia auriculata* and *fistula*, and myrabolams was leased out separately and the revenue realised was credited to the Military Department. As a war measure the following quantities of tan stuffs and

bees wax were also collected and supplied under instructions from the Controller of Tan Stuffs. (The cost of collection was met from funds provided by the Military Department.)

| | TONS. | QRS. | LB. |
|---|---|---|---|
| *North Vellore*— | | | |
| Anogeissus bark ... ... ... ... ... ... | 9 | 23 | 19 |
| Do. leaves (dry) ... ... ... ... ... | 0 | 58 | 6 |
| Bees Wax... ... ... ... ... ... ... | 0 | 4 | 6 |
| *South Vellore*— | | | |
| Anogeissus bark ... ... ... ... ... ... | 75 | 3 | 21 |
| Do. leaves (rosy)... ... ... ... ... | 1 | 21 | 2 |
| Do. leaves (green) ... .. ... ... | 9 | 17 | 25 |
| Mixed leaves ... ... ... ... ... ... | 1 | 21 | 13½ |
| Zizyphus xylopyra fruits ... ... ... ... | 13 | 67 | 22 |
| Bark of Phyllanthus polyphyllus ... ... ... | 0 | 3 | 14 |
| Carissa spinarum leaves ... ... ... ... | 0 | 13 | 4 |
| *West Vellore*— | | | |
| Anogeissus bark ... ... ... ... ... ... | 94 | 33 | 0 |
| Do. leaves ... ... ... ... ... | 1 | 61 | 0 |
| Bees wax ... ... ... ... ... ... ... | 0 | 17 | 0 |
| *Madura*— | | | |
| Anogeissus bark and leaves ... ... ... ... | 16 | 58 | 11 |

In addition, seeds of *Cassia auriculata* were collected departmentally and supplied to different provinces and the other circles.

(3) *Extraction of fodder.*

141. Free removal of grass was allowed in *North* and *South Vellore* and *South Arcot*. In *South Vellore* free removal of thatch grass was largely availed of but the free cutting and removal of fodder grass permitted under the special orders of the Collector on account of fodder famine was not availed of to any appreciable extent.

In *South Arcot* the concession was availed of only in the Kallakurichi range. Owing to drought and fodder scarcity free cutting and removal of grass were permitted from certain closed coupes in *North* and *South Salem* districts. In *Madura* the removal of Hariali grass from Bryant Park reserve in Kodaikanal range was allowed as usual, on permits.

(4) *Hay-making.*

142. In *North Vellore*, grass was leased out to the Military Department on payment of a royalty of Rs. 2 per ton of hay removed. A sum of Rs. 247 only was realized against Rs. 971 in the previous year. The fall was due to poor growth of grass. Four hundred and sixty-nine tons of hay were collected departmentally in Mordana reserve and supplied to the Military Department. The revenue realized was Rs. 19,717 and the total cost of the operation was Rs. 11,082.

In *South Salem*, hay operations were started in the Papireddipatti range for supply to the army but they were stopped on account of drought in the district. The quantity manufactured about 24 tons was sold to the villagers at cost price.

(5) *Grazing.*

143. The revenue derived from grazing was Rs. 2,10,887 against Rs. 1,94,541 in the previous year. The increase was due to the enhancement of grazing fees in *West Vellore* and *North* and *South Salem* districts. The collection of panchayat assessments of 1919–20 in advance and transfer of four reserves from *South Salem* division accounted for the increase in *Trichinopoly* district. On the other hand there was a considerable fall in *South Arcot* due to the diafforestation of several 'provisional' class IV reserves. It is proposed to sell the growth in these areas and then disafforest them for cultivation.

(1) *Bamboos.*

*Western Circle.*

144. Forty-nine thousand two hundred and fifty-three acres of bamboo coupes were leased out *North* and *South Mangalore* and *North, South and Central Coimbatore*. Removals on permits were allowed in the two Mangalore divisions, *South Malabar*, *Nilgiris* and *Kollegal* to meet local demands. Bamboos were also extracted departmentally in *North Mangalore* and *South Malabar* for floating timber.

(2) *Miscellaneous produce.*

145. Minor produce of importance was as usual leased out except in the Mudumalai range of the Nilgiris where the collection is made departmentally, and

Tunacadavu range of South Coimbatore division where the collection was given up on account of the danger of fire. Removal of stone, metal and gravel was allowed free in the Nilgiris and on permits in *South Coimbatore*. In *North Mangalore*, catechu was manufactured departmentally. Collection of honey and wax and the bark of Anogeissus latifolia, Phyllanthus emblica and Elaeodendron glaucum in *North Coimbatore* and of bark of Anogeissus latifolia in *Central Coimbatore* were undertaken departmentally.

(3) *Extraction of fodder grass.*

146. Removal of fodder grass was allowed on permits in the two *Mangalore* divisions, the *Nilgiris*, *Kollegal* and *North* and *South Coimbatore* divisions. In a few cases in *Central Coimbatore* and the *Nilgiris* the right of removal was sold.

(4) *Hay-making.*

147. Hay-making operations on a large scale were undertaken in both the *Mangalore* divisions to meet military requirements and 1,145 tons of hay were despatched to the Bangalore Grass Farm.

(5) *Grazing.*

148. Grazing was as usual controlled by permits.

(*b*) *Agency of exploitation.*

(i) Departmental Agency.

149. *Major produce.*—10·7 per cent of the total outturn was exploited by this agency. The important works were :—the selection fellings and the supply of sleepers and building materials in *Ganjām*, extraction of dead sāl trees in *Vizagapatam*, felling of trees from the unreserved lands of four ranges and the supply of fuel to the Public Works Department for the consumption of steam launches in *Gōdāvari Upper*, clear felling and thinning in Kandikuppa casuarina plantation in *Gōdāvari Lower*, removal of dead trees from the forests in *Kurnool East*, felling timber and fuel from the disafforested area in Siddapuram and in Velgode reserved forest, experimental fellings in connexion with the supply of fuel to the Kurnool Town in *Kurnool West*, and the collection and disposal of *Anogeissus* timber and fuel in the *Kurnools* felled for extraction of bark. *Northern Circle.*

150. *Minor produce.*—The particulars are mentioned in paragraphs 128 and 129 supra.

151. *Disposal of produce at the edge of the forests.*—The outturn of fuel in Kandikuppa plantation in *Gōdāvari Lower* was sold in the plantation. Timber collected in *Kurnool East* was disposed of from depots opened in or near the forests. Timber and fuel felled in *Kurnool West* was sold by auction according to demand.

(ii) By Purchasers.

152. *Major produce.*—All the fellings referred to in paragraphs 106 and 107 and the extraction of overmature trees from coupes in *Kurnool South*, were carried out through the agency of contractors.

153. *Minor produce.*—The extraction of bamboos and collection of minor produce as detailed in paragraphs 128 to 132 supra.

(iii) & (iv) By right holders, and under privileges and free grant.

154. The following statement shows the quantity and estimated value of produce removed by right holders and free grantees :—

| Agency. | Timber. | | Fuel. | | Bamboos. | Grazing. | Minor produce. | Total. |
|---|---|---|---|---|---|---|---|---|
| | In thousands of cubic feet. | Value. | In thousands of cubic feet. | Value. | Value. | Value. | Value. | Value. |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right holders .. .. .. | 3 | 290 | 154 | 2,900 | 64 | 1,138 | 23,571 | 27,963 |
| | | | | | 334 | 13,547 | 559 | 17,608 |
| Free grantees .. .. .. | 33 | 3,168 | .. | .. | | | | |
| Total .. | 36 | 3,458 | 154 | 2,900 | 398 | 14,685 | 24, 30 | 45,571 |

The rights under forest settlement were enjoyed chiefly in *Ganjām* and *Kurnool West*. The value of produce enjoyed was Rs. 27,963 against Rs. 36,766 in the previous year. The hill tribes in *Ganjām*, *Vizagapatam* and the *Gōdāvaris* availed themselves of the privileges of free grazing and removal of forest produce. Free grazing was permitted in the forests of the *Kurnools* owing to scarcity of fodder.

The estimated value of free grants made during the year was Rs. 17,608 against Rs. 24,926 in the previous year. The free grants were mostly for rebuilding houses destroyed by fire.

(i) Departmental Agency.

*Central Circle.*

155. Except the collection of tangedu seed, *Anogeissus* bark, *Zizyphus Xylopyra* fruit and bees' wax, no other departmental collection was undertaken except in *Chingleput* where the unfelled areas in certain plains coupes were worked departmentally in order to avoid deviations from the working plans, and in Nellore district where the collection of minor forest produce was done departmentally through the agency of the Government Yanadis. The decrease under timber was due to a smaller quantity of timber felled for departmental buildings and the increase under fuel was due in *Nellore* to the quantity obtained in Sriharikota coupe which the contractor left after the contract was cancelled, and also to the clearing of growth in several reserves for the formation of inspection lines and boundaries and in *Chingleput* to the unfelled portions of coupes having been worked departmentally in the plain areas of Chingleput range in order to avoid deviating from the prescriptions of the working plan. The increase under bamboos was due to extraction on a larger scale for departmental buildings and for construction of hay ricks; the decrease under minor produce was due mainly to the stopping of departmental hay operations in all districts. The large decrease in Nellore was also due to the failure of crops owing to a storm and to the realization of about Rs. 3,000 (sale proceeds of nux vomica seeds) after the close of the forest year.

(ii) By Purchasers.

156. *Timber.*—The decrease was due to fewer darkhast applications received during the year in *Bellary*, *Guntur* and *Chingleput*; in *Chittoor* to the retention in timber coupes of all species capable of producing good timber; and in *South Cuddapah* to the non-working of some coupes by the contractors.

*Fuel.*—The decrease was contributed by the following districts:—

*Bellary.*—Due to the decrease in the number of fuel coupes sold consequent on the handing over of the leased forests to the Sandur State; *Guntūr*—to the fact that 21 coupes could not be sold for want of demand; *South Cuddapah*—to the cause already stated under *timber*; *Nellore*—to the slow progress of exploitation in the Sriharikota coupe owing to the cancellation of the contract of the previous contractor to the want of waggon supply, and to the prohibitive cost of transport by boats and carts.

*Chingleput.*—Due to less quantity of withered and wind fallen trees from porambokes.

*Bamboos.*—The decrease was more a matter of adjustment of lease amounts than an actual deficit.

*Minor produce including grazing.*—The decrease was chiefly due to the crediting of the revenue from lease of tanning barks to the Military department and to the exclusion of revenue derived from mica from forests.

(iii) Rights and Privileges.

157. Free removal of grass appears in paragraph 136 supra.

In *Anantapur* 42 cubic feet of timber was admitted at the time of settlement of Dokkalakonda reserve to be removed for the purpose of making a ladder for a temple and this was granted during the year. In *North Cuddapah* the concession of free grazing of 45 cows, 190 buffaloes and 850 sheep of Zangalapalli and Velugupalli villages over an area of 810 acres in the Lanakamalai reserve was continued during the year. Under B.P. Forest Mis. No. 744, dated 1st December 1914, the villagers of Chennupalli and Gopavarampalli of Porumamilla range were allowed to graze 150 cows at one anna each. The Collector, taking into consideration

the poverty of Muhammadan wood-cutters of Sidhout range of North Cuddapah, allowed them the privilege of grazing their bulls (24) in the reserve on payment of half the seigniorage rates, i.e., As. 1–6 per head. In *South Cuddapah* free grazing of 691 cows and bulls was allowed to the ryots of Settigunta and its hamlets according to the terms of the forest settlement. In *West Cuddapah* the privilege of grazing of 328 cattle was allowed in Sidhout-Palakondas at As. 1–6 per head as per B.P. Forest No. 376, dated 22nd June 1895.

(iv) FREE GRANTS.

158. The statement appended below shows the details of free grants which were made chiefly for rebuilding houses destroyed by fire. In Nellore grants were made for building huts for criminal settlement. Road materials were removed in West Cuddapah and Chittoor by public bodies for public works.

| — | Timber. | | Fuel. | | Bamboos. | | Grass and grazing. | Other minor produce. | Total value. |
|---|---|---|---|---|---|---|---|---|---|
| | Cubic feet (in thousands). | Value. | Cubic feet. | Value. | Number. | Value. | Value. | Value. | |
| | | Rs. | | | | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | * | 10 | .. | .. | | .. | 130 | .. | 140 |
| Free grantees .. .. | 34 | 6,405 | .. | .. | 4,520 | 78 | 185 | 455 | 7,123 |
| Grants at reduced rates. | .. | .. | .. | .. | .. | .. | 43 | .. | 43 |
| Total .. | 34 | 6,415 | .. | .. | 4,520 | 78 | 358 | 455 | 7,306 |

* Forty-two cubic feet.

(i) DEPARTMENTAL AGENCY.

159. The work done by departmental agency was chiefly confined to the extraction of sandalwood and the collection of tan stuffs and hay for military purposes. In addition timber required by the Remount Depot at Hosur was felled and supplied. *Southern Circle.*

(ii) BY PURCHASERS.

160. There has been an increase in the removal of bamboos and minor produce and decrease in that of timber and fuel.

*Timber* (—36,000 cubic feet).—This is always a variable head depending chiefly on the revenue derived from the value of trees on darkhast lands.

*Fuel* (—2,225,000 cubic feet).—The outturn of fuel removed by purchasers during the previous year was exceptionally high on account of sale of growth in reserves to be disafforested in *South Arcot* and *Trichinopoly*. The decrease in these two districts alone amounts to 2,391,047 cubic feet. Fewer coupes were sold in *West Vellore*, *Trichinopoly* and *Madura* for want of demand. This head also depends on the revenue from sale of withered and windfallen trees on poramboke and waste lands—a variable item.

I think the figure is however only of value for purposes of comparison as it is obtained in the two instances given largely by converting rupees into cubic feet.

*Bamboos* (+ *Rs.* 17,085).—The increase was due to larger areas leased in accordance with the revised scheme in *South Salem* and *Trichinopoly* and to keen competition among the contractors.

*Grazing and minor produce* (+ *Rs.* 39,891).—The increase was chiefly due to the enhancement of grazing fees. It was also due to advance collection of minor produce lease amounts of 1919–20 in *Trichinopoly* district and credit in the accounts of 1918–19.

(iii) RIGHTS AND PRIVILEGES.

161. In *North Vellore* grazing at the ordinary rate of 3 annas per cow unit was continued to the Malayalis in anticipation of the introduction of the forest village system. A scheme for its introduction in Thellai reserve has been submitted. In the Javadis of *South* and *West Vellore* the system of allowing free grazing and giving fire rewards to the Malayalis in return for the protection of forests assigned to them

for grazing was continued and has been working satisfactorily. The rights admitted at settlement in the Palamalai extension, V. Kanapadi reserves and to the villagers near the Gundur and Ariyurshola reserves in *Trichinopoly* are reported to have been enjoyed but no details are furnished.

(iv) FREE GRANTS.

162. The estimated value of free grants was Rs. 10,079 against Rs. 4,884 in the previous year.

The following abstract shows the quantity and the estimated value of produce removed by right-holders and free grantees :—

| — | Timber. | | Fuel. | | Bamboos. | Grass and grazing. | Other minor produce. | Total value. |
|---|---|---|---|---|---|---|---|---|
| | 1,000 c.ft. | Value. | 1,000 c.ft. | Value. | Value. | Value. | Value. | |
| | | Rs. | | Rs. | Rs. | Rs. | Rs. | Rs. |
| Right-holders .. .. | .. | .. | .. | .. | .. | .. | 926 | 926 |
| Free-grantees .. .. | 49 | 5,781 | 4 | 430 | 246 | 3,402 | 220 | 10,079 |
| Total .. | 49 | 5,781 | 4 | 430 | 246 | 3,402 | 1,146 | 11,005 |

The grants were chiefly made for rebuilding houses destroyed by fire. In *West Vellore* a small grant of timber was sanctioned for the construction of the Dharmaraja temple at Nellivoy on the Javadis as an encouragement to the Malayalis. The increase in the value of free grants was due chiefly to the free removal of a larger quantity of fodder grass from *North Vellore* and to larger numbers of grants made in the *South Arcot* and *South Salem* districts and to the transfer to this (the correct head) of the value of free grazing on the Ampthill Downs reserve and of quarrying in *Madura* district.

(i) DEPARTMENTAL AGENCY.

*Western Circle.*

163. *Major produce.*—Timber was for the most part extracted departmentally, as was also fuel in certain cases. The extraction of sandalwood was entirely departmental. The more important operations were the selection fellings in *North Malabar* where the timber is sold at forest depots, the clear fellings and thinnings of the plantations in *South Malabar* where the timber is floated to the coast and sold at Beypore, the selection fellings in *South Coimbatore* where the timber is extracted by tramway and road and sold at Pollachi, the selection fellings in *South Mangalore* where the timber is sold at stump sites, the improvement fellings in the Mudumalai forests of The Nilgiris, the fuel fellings under simple coppice in the eucalyptus plantations of The *Nilgiris*, the coppice with standard fuel fellings in *North* and *South Mangalore* and the extraction of sandalwood in *North Coimbatore* and *Kollegal*, the wood being roughly cleaned in the forest and carted to Satyamangalam where it is finally cleaned, classified and sold by auction.

*Minor produce.*—The chief departmental operations were the supply of hay from *North* and *South Mangalore* to the Military Grass Farm at Bangalore, and that of tanning barks from *North* and *Central Coimbatore.*

(ii) BY PURCHASERS.

164. *Major produce.*—Fuel coupes were as a rule sold standing, the total area sold being 4,922 acres in *North* and *South Mangalore* and four divisions of Coimbatore.

*Minor produce.*—Bamboo coupes were sold standing and other minor produce was for the most part leased out.

165. *Disposal of produce at the edge of the forests.*—*Mangalore North*—373 tons of fuel obtained from improvement fellings were sold at the edge of the forests. *South Mangalore*—6,107 c. ft. of timber and 750 tons of fuel collected departmentally were sold in the coupes. *North Coimbatore*—Agricultural implements were retailed in the forest depots. *Central Coimbatore.* Small fuel in head loads was retailed in the coupes by contractors.

(iii) & (iv) By right-holders and under privileges and free grants.

166. Produce is removed by right-holders only in the two *Mangalore* divisions. Free grants were made chiefly for the reconstruction of houses burnt by fire and for the quarrying of metal and gravel by the Local Fund and Public Works Departments. Free grazing valued at Rs. 1,110 was as usual granted to the Todas and Chettis in *the Nilgiris*.

*(c) Outturn and sources of produce.*

167. The subjoined table compares the outturn of produce collected by different agencies with that of the previous year :— *Northern Circle.*

| Agency of exploitation. | Timber in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos in value. | | Minor produce (including grass and grazing). Gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. |
| | | | | | Rs. | Rs. | Rs. | Rs. |
| Government .. .. | 77 | 169 | 126 | 347 | 9,723 | 22,792 | 18,487 | 46,154 |
| Purchasers .. .. | 867 | 534 | 3,201 | 3,587 | 1,34,373 | 86,936 | 3,85,777 | 3,90,417 |
| Right-holders .. .. | 76 | 3 | 581 | 154 | 705 | 64 | 24,775 | 24,709 |
| Free grantees .. .. | 42 | 33 | .. | | 1,570 | 334 | 15,250 | 14,106 |
| Total .. | 1,062 | 739 | 3,908 | 4,088 | 1,46,371 | 1,10,126 | 4,44,289 | 4,75,386 |

168. *Government agency—Major produce.*—The increase under timber was chiefly due to fellings in *Ganjām* for supply of sleepers and building materials and to the exploitation of increased area of unreserved lands in *Gōdāvari Upper*, while that under fuel was due to sale of top portions of timber felled in *Ganjām*, partly to the incorrect figures furnished in the last year's return and partly to the experimental fellings in Coringa extension in *Gōdāvari Lower*, to the clearance of areas disafforested for cultivation and to the collection of *Anogeissus* fuel left after extraction of bark in *Kurnool West*.

*Minor produce.*—The increase under *bamboos* was due to increased area from which bamboos were extracted by *Chenchu* labour in *Kurnool West* and to a large collection in *Ganjām* and in the *Gōdāvaris* for construction of and repairs to buildings. The increase under *other produce* was chiefly due to the collection of tangedu seeds and *Anogeissus* bark and Sumac in the *Kurnools*.

169. *By purchasers—Major produce.*—The outturn is unreliable as in several cases lease amounts are converted into outturn in proportion to the seigniorage and the accounts maintained by contractors are defective. The decrease under *timber* was chiefly in *Ganjām* due to departmental fellings in unreserved lands instead of through contractors as in the previous year, in *Vizagapatam* to fewer applications for darkhast lands, in *Gōdāvari Upper* to smaller demand for building materials by other departments, in *Gōdāvari Lower* to lack of demand for timber in Rampa forests, in *Kurnool East* to a large number of palmyra trees removed last year from disafforested areas and in *Kurnool South* to non-exploitation of timber coupes to facilitate the manufacture of hay by the Military Department. The increase under *fuel* was mainly in *Gōdāvari Lower* where coupes were opened in Coringa extension.

*Minor produce—Bamboos.*—The decrease was generally due to low prices offered for bamboo coupes owing to dullness of market, to want of demand in *Gōdāvari Lower* for sugarcane cultivation and construction of buildings and to the temporary reduction of seigniorage on removals from Rampa forests and to non-leasing of bamboos in *Kurnool South* in favour of hay operations. The increase under *other produce* which amounts to about Rs. 5,000 calls for no special explanation.

170. *By right-holders.*—The decrease in the quantity of *timber* and *fuel* was in *Ganjām* due to non-grant of concessions to *Khonds*.

171. *By free grantees.*—Being fluctuating, calls for no special explanation.

*Central Circle.*

172. The total outturn of produce collected by different agencies compared with the previous year is appended below :—

| Agency of exploitation. | Timber including sandalwood in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos in number. | | Minor produce (including grass and grazing). Gross value in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. |
| | | | | | | | Rs. | Rs. |
| By Government Agency.. | 15 | 12 | 56 | 82 | 11,175 | 23,096 | 1,23,895 | 53,850 |
| By purchasers (including confiscation). | 873 | 712 | 7,652 | 5,512 | †2,679,487 | 1,428,616 | 9,48,945 | 7,97,939 |
| By right-holders .. | .. | .. * | .. | .. | .. | .. | 143 | 130 |
| By free-grantees .. | 46 | 34 | .. | .. | 12,760 | 4,520 | 741 | 640 |
| Total .. | 934 | 758 | 7,708 | 5,594 | 2,703,422 | 1,453,232 | 10,73,724 | 8,52,559 |

* Forty-two cubic feet. † Correct figure furnished by the District Forest Officers.

The variations have already been explained in paragraphs 154 and 155 supra. The rates of grazing fees levied in different districts are given in Form No. 74. The number of animals licensed to grazing on payment was 729,797 against 916,360 in the previous year.

*Southern Circle.*

173. The total outturn is given in the following statement :—

| Agency of exploitation. | Timber including sandalwood in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos in value. | | Minor produce including grass and grazing value. | |
|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18 | 1918-19. |
| | | | | | Rs. | Rs. | Rs. | Rs. |
| By Government Agency. | 23 | 32 | 40 | 43 | 532 | 711 | 20,009 | 21,286 |
| By purchasers .. .. | 788 | 752 | 5,626 | 3,401 | 1,14,675 | 1,31,625 | 4,38,810 | 4,77,637 |
| By right-holders .. | .. | .. | .. | .. | .. | .. | 906 | 3,622 |
| By free-grantees .. | 24 | 49 | 3 | 4 | 290 | 246 | 855 | 926 |
| Total .. | 835 | 833 | 5,669 | 3,448 | 1,15,497 | 1,32,582 | 4,63,580 | 5,03,471 |

The variations have already been explained. The rates of grazing fees levied in the several districts are shown in Form No. 74. The actual number of animals licensed on payment was 554,994 against 670,190 in the previous year.

*Western Circle.*

174. The subjoined table compares the outturn of produce through all agencies with that of the previous year :—

| Agency of exploitation. | Timber including sandalwood in thousands of cubic feet. | | Fuel in thousands of cubic feet. | | Bamboos in value. | | Minor produce including grass and grazing in rupees. | |
|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. |
| | | | | | Rs. | Rs. | Rs. | Rs. |
| By Government agency .. | 517 | 675 | 849 | 816 | 10,142 | 14,833 | 39,881 | 47,967 |
| By purchasers .. .. | 863 | 889 | 4,903 | 4,611 | 36,634 | 33,557 | 1,67,347 | 2,09,977 |
| By right-holders .. .. | 27 | 19 | .. | .. | .. | .. | .. | .. |
| By free grantees .. .. | 13 | 9 | .. | .. | 8 | 38 | 1,438 | 3,007 |
| Total .. | 1,420 | 1,592 | 5,752 | 5,427 | 46,784 | 48,428 | 2,08,666 | 2,60,951 |

*By Departmental Agency—Major produce.*—The increase under the head of timber was chiefly due to departmental fellings in *North* and *South Malabar*. The selection felling in the former division and the clear felling for planting in the latter having been done departmentally during the year under report, while similar fellings in the previous years were done by contractors who purchased the timber standing.

*Minor produce.*—The increase under bamboos was due to departmental timber operations in *South Malabar*, the bamboos being required for floating. The increase under minor produce was due to increased supplies to the Farms Department and Controller of Tan Stuffs, 1,145 tons of hay being supplied from North and South Mangalore and 30,576 lb. of barks from North Coimbatore, 2,800 lb. from Central Coimbatore and 345 lb. from Kollegal.

*By purchasers.*—The increase under minor produce is due to higher prices, to the leasing out of the right to collect Cassia fistula and Phyllanthus emblica barks, to the increased demand for tanning stuffs and to the higher grazing fees imposed in *North Coimbatore.*

## CHAPTER III.—FINANCIAL RESULTS.

175. The financial results of the year are compared with those of the last year and the average of the preceding five years in the following abstract:— *Northern Circle.*

| | 1918-19. | 1917-18. | Average of the previous quinquennium. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. .. .. | 6,95,155 | 8,29,435 | 7,93,078 |
| *Expenditure.* | | | |
| Refunds .. .. .. .. .. .. .. .. | 7,707 | 2,354 | 9,378 |
| A. Conservancy and Works .. .. .. .. .. .. | 2,50,831 | 2,33,834 | 2,92,076 |
| B. Establishments .. .. .. .. .. .. | 4,18,105 | 3,76,351 | 3,81,997 |
| Total expenditure .. | 6,76,643 | 6,12,539 | 6,83,951 |
| Surplus .. | 18,512 | 2,16,896 | 1,09,127 |

NOTE.—The above figures exclude the actuals belonging to Golgonda and Hill Madgole.

As compared with the previous year, there was a heavy decrease in receipts and a considerable increase in expenditure. The surplus fell by about 2 lakhs. The chief cause for this position was the European war. The control of tanning stuffs by the Munitions Board, the stoppage of several of the remunerative works in the *Kurnools* to facilitate the collection of hay by the Military Department, and the restrictions on transport by railway which considerably affected the demand and prices for forest produce mainly contributed to the decrease in revenue. Thirty-three per cent of the revenue was derived from major produce, 41 per cent from minor produce, 17 per cent from grass and grazing and 9 per cent from miscellaneous sources. Of the expenditure 17 per cent was incurred on the exploitation of forests, 27 per cent on the upkeep and improvement and 56 per cent on miscellaneous items. The revenue outstanding at the close of the year was Rs. 1,18,249 against Rs. 1,34,807 at its commencement; of the former, Rs. 12,593 fell due within the year which was less than half of the amount similarly due at the end of the previous year. The estimated value of the produce in the sale depots at the end of the year was Rs. 25,957 against Rs. 11,083 at its beginning; most of the stock consisted of the unsold sleepers in *Gānjām.*

The important variations between the actuals of the year and those of the previous year are explained below.

### RECEIPTS.

#### (i) *By departmental agency.*

*Timber*, + *Rs.* 52,147.—The increase occurred chiefly in *Ganjām* due to the supply of sleepers to the Indian Munitions Board and Messrs. Bird & Co., Calcutta, and building timber to the Public Works Department, in *Gōdāvari Upper* to the extraction and sale of timber from unreserved lands and in *Kurnool South* to the sale of the last year's stock of timber.

*Fuel*, + *Rs.* 2,993.—Due chiefly to the sale of top portions of trees felled in *Ganjām* for supply of sleepers and building materials, fuel felled in a tank in *Kurnool East* for providing labour to the *Chenchus* and *Anogeissus* trees felled for extraction of bark in *Kurnool West.*

*Bamboos*, + *Rs.* 11,809; *minor produce* + *Rs.* 9,187.—The increases were mainly in *Kurnool West* owing to the larger outturn of bamboos by the *Chenchu* labour and to the abnormally heavy crop of tamarind and the consequent large supply to the Military Department.

(ii) *By purchasers.*

*Timber*,—*Rs.* 37,095.—Due chiefly to the departmental felling of sāl areas instead of by contractors to meet the demand for sleepers and building materials, to lack of demand for timber from unreserved lands and Rampa forests in *Gōdāvari Lower* for want of transport facilities and to the non-leasing of coupes in *Kurnool South*, the object being to facilitate the collection of hay by the Military Department.

*Fuel*,—*Rs.* 14,501.—The decrease was chiefly in *Kistna* due to poor price realized for coupes and to non-sale of some of the coupes for want of demand and in *Kurnool South* for the reason given against '*Timber*' supra.

*Bamboos*,—*Rs.* 52,826.—The stoppage of fellings in *Kurnool South* to set free labour for the hay operations, the slack demand in *Gōdāvari Upper*, the absence of demand for bamboos for buildings or sugarcane cultivation owing to famine, and the reduction of seigniorage on removals from the Rampa forests in *Gōdāvari Lower* and the departmental extraction by *Chenchu* labour in *Kurnool West* chiefly accounted for the decrease.

*Grazing and fodder grass*, + *Rs.* 5,307.—Due to the increased number of cattle licensed to grazing in *Kistna* and *Kurnool West* and *South* and to the enhancement of fees for Lambadi cattle in the last division.

*Minor produce*,— *Rs.* 1,14,181.—The decrease was chiefly due to the assumption of complete control over the tan-stuffs by the Munitions Board, the Forest Department receiving only the payment of an amount equal to the average receipts by the lease of such materials during the quinquennium before the war.

(iii) *Miscellaneous* (*including confiscated drift and waif wood*).

+ Rs. 2,880. Calls for no special remarks; the receipts are of fluctuating nature.

EXPENDITURE.

*A. Conservancy and works.*

+ Rs. 16,997. The exploitation of timber in *Ganjām* for supply of sleepers and building materials mainly accounted for the increase.

*B. Establishments.*

The increase which amounted to Rs. 41,754 was chiefly due to the grant of war allowance.

*Central Circle.*

176. The subjoined statement compares the results of the year with those of the previous year and with the previous quinquennial average:—

| — | 1918-19. | 1917-18. | Average of the previous five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. .. .. | 10,81,869 | 14,20,770 | 12,50,988 |
| *Expenditure.* | | | |
| A.—Conservancy and Works including refunds. | 2,07,092 | 3,20,693 | 2,52,959 |
| B.—Establishments .. .. .. .. | 4,32,457 | 3,89,254 | 3,87,036 |
| Total of A and B .. | 6,39,549 | 7,09,947 | 6,39,995 |
| Net results .. | + 4,42,320 | + 7,10,823 | + 6,10,993 |

There is a surplus of Rs. 4,42,320 in favour of the year against that of Rs. 7,10,823 obtained in the previous year and of Rs. 6,10,993, the quinquennial average.

(1) The decrease in surplus in the year is due to a decrease of Rs. 3,22,804 under II (*e*) Minor forest produce owing to crediting the lease amounts of cassia auriculata and cassia fistula barks and other tanning materials to the Military

Department and also to a decrease of Rs. 8,613 under II (*a*) timber and of Rs. 8,514 under V (*b*) Miscellaneous which are variable heads.

(2) During the year the revenue decreased by Rs. 3,38,901 and the expenditure by Rs. 70,398.

(3) Of the receipts 23 per cent were realized from major produce, 32 per cent from grass and grazing, 36 per cent from minor produce and 9 per cent from miscellaneous items.

(4) Of the expenditure 1·47 per cent was directed towards exploitation, 36·35 to the upkeep and improvement of the forests and 62·18 per cent to miscellaneous items. The outstanding revenue at the close of the year was Rs. 6,23,069 of which Rs. 14,492 fell due within the year. The estimated value of timber and other produce at sale depots at the close of the year was Rs. 6,081 against Rs. 403 at the beginning of the year. The important variations between the actuals of the year and those of the previous year are explained below :—

RECEIPTS.

(i) *By departmental agency.*

The increase under minor forest produce is due to adjustment by the Military Department of value for the balance of hay collected in the previous year, despatched during the year.

| | | Rs. |
|---|---|---|
| *Timber* ... ... ... ... | + | 425 |
| *Fuel* ... ... ... .. | — | 181 |
| *Bamboos* ... .... ... ... | + | 11 |
| *Sandalwood* ... ... ... ... | + | 76 |
| *Minor forest produce* ... ... | + | 8,032 |

(ii) *By purchasers.*

| | | Rs. |
|---|---|---|
| *Timber* ... ... ... ... | — | 8,613 |
| *Fuel* ... ... ... ... | — | 1,594 |
| *Bamboos* ... ... ... ... | + | 1,746 |
| *Grazing* ... ... ... ... | + | 1,237 |
| *Minor forest produce* ... ... | — | 3,30,997 |

*Timber*, — *Rs.* 8,613.—This is a fluctuating item, the chief source to it being the value of trees on unreserved lands assigned on darkhast.

*Fuel*, — *Rs.* 1,594.—Due to low prices realized by the sale of coupes owing to the control exercised on railway transport.

*Bamboos*, + *Rs.* 1,746.—Due to better prices realized for bamboo coupes in Chittoor district.

*Grazing*, + *Rs.* 1,237.—Due to larger areas of kanchas sold and higher rates realized in Chingleput and to enhancement of grazing fees from 3 to 8 annas a cow unit in Anantapur district.

*Minor forest produce*, — *Rs.* 3,30,997.—The decrease is due to the same cause explained for the decrease in the surplus of receipts during the year—vide paragraph 175 (1) supra.

(iii) *Miscellaneous* (*including confiscated and drift and waif wood*).

— Rs. 9,043 due to there having been no sales of disafforested blocks as there was in the previous year in Bellary district and to smaller number of forest offences compounded and consequent short collection of compounding fees in Anantapur North and South Cuddapah districts.

EXPENDITURE.

*A. Conservancy and Works.*

— Rs. 1,13,601 due to the hay operations conducted by the department in the previous year having been stopped during the year.

*B. Establishment.*

+ Rs. 43,203 due (1) to payment of privilege leave and furlough allowances to Mr. H. B. Bryant, Conservator of Forests, during his stay of about four months in India, plus salary to the acting officers in his place, (2) to sanction and payment of local or war allowances to subordinates on Rs. 50 and below and (3) to additional

establishment of 6 rangers for West Cuddapah district, 32 guards for Guntūr, 4 foresters for South Cuddapah and 3 foresters and 24 guards for Chingleput district sanctioned in the temporary scale during the year.

*Southern Circle.*

177. The financial position of the year under report is compared with that of the previous year and the average of the preceding five years in the following abstract:—

| | 1918-19. | 1917-18. | Average of the preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 14,22,218 | 16,93,340 | 13,37,865 |
| A.—Conservancy and Works (including refunds). | 3,13,979 | 2,87,255 | 2,50,845 |
| B.—Establishment .. .. | 4,32,134 | 4,24,100 | 3,91,528 |
| Total expenditure .. | 7,46,113 | 7,11,35 | 6,42,373 |
| Net surplus .. | 6,76,105 | 9,81,985 | 6,94,992 |

The gross receipts of the year were less than those of the previous year by Rs. 2,71,122 and the expenditure exceeded that of the previous year by Rs. 34,758. The net surplus fell short of that of the previous year by Rs. 3,05,880 and that of the preceding quinquennium by Rs. 18,887. The previous year's revenue was a record one due partly to the capital value of reserved forests sold in *South Arcot* and partly to the sale of a very large quantity of sandalwood from trees blown down by the cyclone in the Javadis. There were no such extraordinary items during the year under report.

Towards receipts, major produce contributed 53·1 per cent, minor produce 40·9 per cent, and miscellaneous sources 6 per cent. 7·4 per cent of the expenditure was on exploitation, 43·1 per cent on the upkeep and improvement of the forests and 49·5 per cent on miscellaneous items. The proportion of net to gross revenue fell from 57·9 per cent to 47·5 per cent. The outstanding revenue at the close of the year was Rs. 4,23,309, of which Rs. 38,271 fell due within the year. The estimated value of timber and other produce at the sale depots at the close of the year was Rs. 1,12,737 against Rs. 1,68,982 at the beginning of the year.

### Receipts.

The important variations between the actuals of the year under report and those of the previous year are explained below:—

(i) *By departmental agency.*

*Sandalwood*, — *Rs.* 1,19,798.—In the previous year sales were abnormal on account of the removals necessitated by the cyclone of 1916.

*Minor produce*, + *Rs.* 12,517.—Due to the supply of hay departmentally to the Military Department from *North Vellore* division.

(ii) *By purchasers.*

| | | Rs. |
|---|---|---|
| *Fuel* .. .. .. .. .. .. .. .. | — | 1,83,299 |
| *Bamboos* .. .. .. .. .. .. .. .. | + | 26,718 |
| *Grazing* .. .. .. .. .. .. .. .. | + | 16,346 |

These variations are due to causes referred to in paragraph 159 supra.

*Minor produce*,—*Rs.* 21,839.—Due to the credit of revenue from leases of tanning barks to the Military Department which gave credit to this department only for the amount of the average of the five years previous to war.

(iii) *Miscellaneous* (*including confiscated drift and waifwood*).

— Rs. 3,967 due to a less number of offences compounded.

## EXPENDITURE.

### *A. Conservancy and Works.*

The expenditure during the year under report exceeded that of the previous year by Rs. 26,724. The increase was chiefly under I (*d*) due to the purchase of patta sandalwood trees on the Tiruppattur Javadis, under I (*e*) due to hay-making operations in the *North Vellore* and *South Salem* divisions, under VII (*b*) due to heavy expenditure on buildings in *South* and *West Vellore* and *South Arcot* districts and under VIII (*g*) due to tending, etc., operations carried out in *North Salem* in accordance with the prescriptions of the Hosur sandalwood working plan, clearance of prickly-pear in *South Salem* and *Madura*, and payment of war allowance to reserve watchers.

### *B. Establishment.*

The expenditure on establishment increased by Rs. 8,034 when compared with the previous year. There was an increase of Rs. 32,137 under I (*e*) due to payment of war allowance. This was partly counterbalanced by savings under Salaries and II. Travelling allowances due to the abolition of the working-plans establishment and the posting of a Provincial officer to the charge of North Salem division.

178. The financial results of the year are compared with those of the previous year and the average of the preceding five years in the following abstract:— *Western Circle.*

| — | 1918–19. | 1917–18. | Average of the preceding five years. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| Revenue .. .. .. .. | 17,17,267 | 14,69,495 | 10,57,403 |
| Expenditure— | | | |
| Refunds .. .. .. .. | 3,694 | 5,792 | 4,942 |
| A. Conservancy and Works .. | 6,47,341 | 4,84,234 | 4,62,666 |
| B. Establishment .. .. .. | 4,18,555 | 3,90,541 | 3,80,072 |
| Total expenditure .. | 10,69,590 | 8,80,567 | 8,47,680 |
| Surplus .. | 6,47,677 | 5,88,928 | 2,09,723 |

There was an increase in the surplus during the year under report of Rs. 58,749. Of the total receipts 69 per cent was realized from major produce, 10 per cent from minor produce, 8 per cent from grass and grazing and 13 per cent from miscellaneous sources. Of the expenditure, 50·8 per cent was devoted to the exploitation of the forests, 25·5 per cent for their upkeep and improvement and 23·7 per cent to miscellaneous items. The revenue outstanding at the end of the year was Rs. 4,35,744, of which Rs. 70,777 fell due within the year. The estimated value of the produce in sale depots was Rs. 1,38,893 against Rs. 5,83,388.

The important variations between the actuals of the year under report and of the preceding year are explained below:—

## RECEIPTS.

### (i) *By departmental agency.*

*Bamboos*, + *Rs.* 4,520.—The increase was in South Malabar due to the sale of a larger number of bamboos used for floating.

*Sandalwood*, + *Rs.* 2,13,674.—This is due to the fact that in the previous year very little sandalwood was sold.

*Grass and other minor produce*, + *Rs.* 36,237.—Due to the realization of the sale-proceeds of hay supplied to the Farms Department in the previous year.

### (ii) *By purchasers.*

*Timber*, —*Rs.* 15,970.—The decrease was in North Malabar and was due to the fact that timber was extracted departmentally, while in 1917–18 it had been sold standing.

*Bamboos*, —*Rs.* 4,119.—Due to the sale of a smaller number of coupes in Central Coimbatore.

*Grazing*, + *Rs.* 59,981.—The increase was in the four divisions of Coimbatore due to the enhanced rates of grazing fees.

*Minor produce*,—*Rs.* 5,947.—Due to the realization from Avaram, Konnai, etc., barks having been credited to the account of Central War Controller instead of to 'Forests.'

(iii) *Miscellaneous.*

— Rs. 34,330.—Due to the realization of a smaller amount by sale of elephants.

EXPENDITURE.

*A. Conservancy and works.*

+ 1,63,107.—The chief causes which contributed to the increase were : the increased felling of timber and bamboos, hay operations on a larger scale for supply to the Farms Department, the purchase of a greater number of bullocks and buffaloes, the capture of more elephants and the increased cost of maintenance of live-stock owing to the rise in cost of grain, the purchase of tramway materials, formation of new plantations, heavier cost of maintenance of young plantations, extensive sowing operations ; clearing of prickly-pear over a larger area, and generally the rise in wages.

*B. Establishment.*

+ Rs. 28,014.—The increase was due to the increase in the rate of war allowance paid to subordinates.

## CHAPTER IV.—RESEARCH AND EXPERIMENTS.

*Northern Circle.*

179. *Experiments—Ganjām.*—Two experiments near Tarasingi were made to see whether cut back sāl switch growth in bamboo areas can hold its own against cut back bamboos. Several experiments in the seasoning of timbers in various ways are now being made. *Gōdāvari Lower*—The attempt to kill *Zizyphus Oenoplia* and other creeper by painting the cut stumps with lime paste again proved a failure. *Kurnool West*—Attempts to inoculate *Butea frondosa* trees with lac were continued. A few trees were successfully inoculated.

RESEARCH.

*Central Circle.*

180. No research work was undertaken. The necessity for the establishment of a research institute appears to have been recognized and an Imperial officer (Mr. D. T. Barry) has been appointed during the year.

181. *Experiments—Bellary—Tangedu.*—Experimental plots were sown with tangedu seed in different localities during the year with a view to determine the best method of cultivation and the soil best suited for its growth.

(1) One acre in Jagikalkutta reserved forest and 10 acres in Sogi reserved forest were ploughed and seeds sown broadcast. The operation was successful an it has been proposed to extend operations during the current year in adjoining area.

(2) The operation of last year in Bandri reserved forest was continued this year and 4 acres in plots of one acre each were sown under the following methods :—

Plot A.—Seed sown broadcast and then ploughed over once.

Plot B.—Area first ploughed, then seed sown broadcast and then ploughed again.

Plot C.—Ploughing in squares and seeds dibbled in at the corners of the squares.

Plot D.—Areas fully ploughed and then seeds dibbled in furrows two feet apart. The germination was more successful where the soil was sandy and soft than in stony soil.

(3) Ten acres of land in Kakkuppi extension reserve were ploughed and seed sown broadcast and then ploughed over again. The operation was found to be a complete success and it is proposed to extend it in 1919-20.

(4) In Dharmapuri reserve seven acres of land were ploughed and sown broadcast with tangedu seeds. About 70 per cent of the seedlings have survived.

(5) The area of two acres sown in Banavasi reserve in October 1917 with tangedu is reported to be a success and about 75 per cent of the seedlings survive,—another 2 acres in the same reserve was similarly treated in September 1918 and is reported to be also successful.

(6) In Kuppagal reserve two acres of land were ploughed and weeded and tangedu seeds sown broadcast and also dibbled in furrows four feet apart. Although the seeds germinated they died off during the hot weather. It is now proposed to start a demonstration area in Anantapur under a special staff to ascertain the best and cheapest way to raise tangedu from such. The tangedu sowing operation of the previous year in Bellary range proved a failure. *Hardwickia binata* seeds were sown under the following methods in an area of 21 square chains in seven plots in Bandri reserved forest.

Plot 1.—Ordinary seed dibbled three feet apart.

Plot 2.—Ordinary seed dibbled in pits three feet apart.

Plot 3.—Seeds soaked in water for 48 hours and dibbled three feet apart.

Plot 4.—Seeds soaked in water for 48 hours and dibbled in pits three feet apart.

Plot 5.—Seeds specially prepared in a pit; that is seeds packed in alternate layers with manure in a pit covered up with earth and water for about two weeks, dibbled three feet apart.

Plot 6.—Seeds soaked in pits three feet apart.

Plot 7.—This was divided up into three plots namely (1) seedlings reared in baskets from ordinary seeds, (2) seedlings reared from seed soaked in water for 48 hours and (3) seedlings reared from seed specially prepared. The plots 1, 3, 5 and 7 were found to be a total failure; in 2, 4 and 6 seedlings in about 45 per cent of the pits were found but subsequently they also died off for want of rain.

The experimental operation of *Hardwickia binata* of last year were unsuccessful in Hospet, Harpanahalli and Adoni ranges.

*Sandal.*—The sowing of sandal seeds along the vanka in Bandri coupes III and IV was a failure and the experimental sowing of sandal in one acre plot in Somalapuram reserve met the same fate for want of rain.

*Anantapur.*—Tangedu seeds were sown in furrows two feet apart in three reserves covering an area of 167 acres. The sowing owing to unfavourable weather conditions was conducted late in the year and the few that germinated have subsequently died. It remains to be seen whether further germination will take place this year after rain.

*North Cuddapah.*—Redsanders. A sample plot of two acres had been laid out in Pitchireddibhavi coupe 2, to ascertain the best way of getting regeneration of red sanders and also how to help the established seedlings. The results are being watched.

*Sandalwood.*—The older saplings of sandal near Vaneswaram stream are thriving well. Close to this area and in selected localities in the Nallamalais and in Lankamalais of Vonipenta and Porumamilla ranges sandal seeds were sown in June 1919 and the germination is fair throughout.

*South Cuddapah.*—In the experimental plots laid out in Kodur red sanders plantation in the Ballapalle range by the Imperial Sylviculturist proved a failure in spite of every attempt made to keep the seedlings free from the weeds. The cause of failure was due to want of sufficient moisture in the soil.

An experimental plot of $2\frac{1}{2}$ acres in extent was taken in Kodivengammabhavi coupe No. 1 of north series of Kodur range and several experiments made in five parts of the plot by sowing red sanders. Though all apparently died in April and May it was observed that some were reviving after the rains.

An experiment was made to study the growth of red sanders in an area of 1 acre in Coupe No. 1 of Gadela improvement felling series. There were 124 seedlings and 158 coppice shoots. In April and May 1919 it was observed that 118 seedlings had apparently died and all coppice except four were thriving. After the first break of the monsoon in the latter part of June 1919, 67 seedlings were found living and all the coppice surviving. It is thus seen that most of the seedlings that died back in the hot weather sprouted again after the first few showers.

Tending seedlings in the improvement coupes with the object of increasing the stock of valuable species is of utmost importance, though it may appear expensive to start with.

With the object of finding out the girth and height increment in Rajampet range sample plots of 1 acre each were opened in 5 coupes in October 1918 and their measurements were recorded at the same time. Measurements will be recorded again in the 5th year as per provisions of the working-plan.

*West Cuddapah.*—Tangedu seeds were sown in all ranges; it is partially successful in three ranges and failed in others owing to prolonged hot weather and want of timely rain.

*Sandal seeds* were sown in selected plots immune from fire in all ranges but the operation was not successful except in one range.

In Konarazupalle a 30 feet square plot was selected for carrying out experiments on the Shumac of *Anogeissus latifolia*, and the results will be carefully watched, leaves plucked periodically and results recorded.

*Nellore.*—The caterpillar that was attacking Anogeissus was collected in various stages and sent to Entomologist, Dehra Dun, for identification and under his instructions the experiments are continued. In Udayagiri and Rapur ranges experiments were conducted for preparing Shumac and the results are awaited.

In *Chinglepet*, fruits of samples of *Zizyphus xylopyra* were sent to Messrs. Chambers & Co., and Messrs. Best & Co., to be tested. No report has been received from the former. The fruits sent to the latter were reported to be too green to be of use.

In *Chittoor*, girth measurements of red sanders in the sample plot started by the Madras Forest College in Chittoor Reserved Forest were taken and recorded. The results of the experimental burning of 2 acres in the Inuparallamitta felling series of 1917–18 have not yet been recorded.

## Research and Experiments.

### *Sandal.*

*Southern Circle.*

182. *The effect of girdling.*—The experiments still continue in *West Vellore*, but seem to show that girdling does little except cause a slight discoloration in the immediate neighbourhood of the place girdled.

### *Is sandal an obligate root parasite?*

Experiments continue in both *South* and *West Vellore* districts at Komattiyeri and Melpat both with grown trees and with seedlings; the chief difference being that at Melpat the healthiest trees found were selected, whereas those at Komattiyeri were certainly no more robust than their neighbours. In both localities, a trench is dug till it reaches the subsoil and kept absolutely clear of all vegetation. Inspection is made quarterly by the District Forest Officer and I saw those near Komattiyeri myself in March 1919. There is no difference between the trenched trees there and their neighbours. In the case of the seedlings plots at Komattiyeri, a plot 10 feet in diameter was trenched to the subsoil; all vegetation was removed before the seed was sown, and the plots are kept scrupulously clean. The only conclusion so far is, that if the sandal is an *obligate* parasite, many of the plants must "take in one another's washing". The fact that sandal is usually a root parasite and is the better for such parasitism is not disputed. I should add, that these seedlings are occasionally watered. There are 13 plants from the seed sown in August 1916 of which, 4 are particularly strong, the tallest being 7′ 10″ in height, and $3\frac{1}{2}$″ in girth at the base. In the case of 7 plots sown on 19th July 1917 the seedlings in one plot have died out. The other 6 plots contain 18 plants, the tallest of which is 5′ 1″ high most being between 2 and 3 feet in height. *Jatropha curcas* seems to make a particularly good host—the plant mentioned as being 9 feet high in the last report is now 13′ 1″ high and others sown at the same time (19th July 1917) are 9′ 9″, 7′ 5″ and 5′ 10″ in height.

*The Andiappanur experiments (West Vellore).*

The roots of the four sandal trees under treatment (roots exposed, rootlets cut and sulphuric acid poured in to auger holes) have shown no signs of spike, nor for that matter do they show any appreciable signs of having suffered from the treatment.

*Production of root suckers.*

Trenching in sandal areas has been continued in *South* and started in *West Vellore* districts. It certainly gives some results and it remains to be seen whether the shoots will form satisfactory trees, or, remain stunted as is common with the tamarind.

*Spike disease.*

The attempt to stop the spread of 'spike' at Nellivasal, in *West Vellore* by removal of all growth has not been completely successful as ten spiked trees have been found in July 1919, just outside the area dealt with. The process of removing *Zizyphus œnoplia*, *Scutia*, *Dodonoea* and *Cipadessa fruticosa* and the sandal is being repeated.

The report of the officer on special duty investigating the spike disease of sandal has been sent separately to the Chief Conservator of Forests.

The experiment in sowing seed from spiked trees was a failure as very few seed germinated and what did grow were eaten by cattle.

Trees suffering from 'Lanky spike' or 'lanky degeneration' seem to revert to normal after a time, no tree under observation has yet done otherwise.

The disease seems to have got into the Kollimalai hills in *Trichinopoly* very badly, a report received on 8th September showing 4,000 trees attacked at Puliyansholai alone.

*Bamboos.*

Experiments on a small area are being carried out in *South Vellore* with *Dendrocalamus strictus* to ascertain—

(1) the length of life of the culms,

(2) whether any external features can be relied on to determine the age of a culm,

(3) what rotation will give most culms,

(4) how to thin a clump to facilitate working,

(5) whether the time of felling affects the growth of further culms.

Results can only be expected after a series of years.

The experiments in *South Salem* with *Bambusa arundinacea* have died a natural death as the bamboos have flowered. This flowering by the way is more or less universal in the Shevaroys and in the Denkanikota range (*North Salem*) near Aiyur.

*Thinning of Teak and Albizzia Amara Coppice.*

In the case of *Albizzia amara* it seems to make no difference whether the trees are cut flush with the ground or 8" above it, or whether the stumps are trimmed or left rough. As regards the reduction of the number of shoots on a stool it would appear to be appreciated as *Madura* reports that thieves single out the stems from thinned stumps for special attention. I saw most of these experiments, which are in Madura district in August 1919.

As regards the thinnings in teak coppice at Mundanthorai no information has again been furnished and there has been a change of officers in the district charge lately.

*Hardwickia Binata.*

Pruning continues to give satisfactory results in *North Vellore*.

*Mahogany.*

Most of the mahogany trees in the Marudam tope in *South Arcot* district have been stolen—the ranger has since been invalided. It is perhaps worth noting that the trees just below the 'Thirthadoddi' in the Alagar Hill reserve in *Madura* district put out about 1892, are reproducing themselves. The largest trees here were 6′ $5\frac{1}{2}$′ and $5\frac{3}{4}$′ in girth at breast height with clear boles of 18′ and upwards in length.

*Regeneration in Evergreen Forests.*

*Tinnevelly* continued to work at *Balanocarpus utilis*, *Hopea parviflora*, *Filicium* and *Gluta* but has not reported results. My personal inspection in March gave me the impression that he was inclined to keep too heavy cover overhead in order to keep down weeds. The coating of the seed of *Balanocarpus* with red lead has apparently disgusted the pigs and the seedlings are now much more numerous.

*Inquiries about Tanning Materials.*

*West Vellore* sent specimens of leaves of *Phyllanthus polyphyllus* and *P. emblica* and fruits of the latter to the Controller of Tan Stuffs, Madras, but has not heard of the results.

*Western Circle.*

183. The more important experiments and research work carried out during the year have been—

(1) *Sylviculture.*

(*a*) *Sowing.*—In *North Mangalore* seed of *Hopea Parviflora*, *Terminalia Tomentosa*, *Artocarpus Hirsuta*, *Lagerstræmia Lanceolata*, Dalbergia—probably *Sissoides*—*Xylia Xylocarpa* and *Terminalia paniculata* were sown broadcast in small experimental gardens. It is not stated whether the sowing was done under shade or in the open or whether the soil was prepared in any way. No result has been reported. In *South Malabar* seed of *Terminalia tomentosa*, *Lagerstræmia Flos-reginæ* and *Adina cordifolia* was sown broadcast in a nursery. In *North Coimbatore* unsuccessful attempts were made to raise *Pterocarpus santalinus*; the seeds germinated but the young plants died in the hot weather. In the same division an attempt was made to enlarge a 'shola' which had suffered from fire by sowing along its outskirts, species usually found in such forest. The Conservator has recently inspected this work. The results are poor as shola species will not as a rule grow on the bare hill sides outside the sholas, but a certain number of seedlings of *Eugenia sp.*, *Machilus sp.* and of an unknown species have germinated. In *Central* and *South Coimbatore* seed of *Eucalyptus tetracarnis*—which species is said to grow well on the plains of Nellore was sown both in nurseries and in the forest. No germination has taken place. In *South Coimbatore* also seed of *Dalbergia latifolia*, *Pterocarpus marsupium Bauhinia sp.*, *Acacia sp.*, *Tamarindus indicus*, and *Albizzia amara* were sown in various plots. Plots of pure teak raised from seed in previous years in this division were tended. In various divisions seeds of *Cassia auriculata* were sown, but very little success was obtained.

(*b*) *Natural regeneration*—In *South Malabar* a plot of *Xylia xylocarpa* was thinned and weeded in varying degrees of intensity in order to discover the requirements of this valuable species in the matter of reproducing itself naturally.

(2) *Spike disease.*

The only work done was that referred to in paragraph 84.

(3) *Utilization.*

Experimental seasoning of the timber of the following species was commenced in *South Mangalore*, *North Malabar* and *Nilgiris*—*Hopea parviflora* and *Wightiana*, *Eugenia gardneri*, *Hardwickia pinnata*, *Alstonia scholaris*, *Ficus asperrima*, *Vateria indica* and *Eucalyptus globulus*. From *North Malabar*, *South Mangalore* and *Kollegal* experimental supplies of *Grewia tiliaefolia* timber, *Becsha* reeds (for tent poles), *Hopea* and *Cassia fistula* bark (for tanning) and oil from *Chloroxylon Swietenia* were sent to various firms and officials.

In *Central Coimbatore* 26 trees of *Zizyphus jujuba* were inoculated in October 1918 with lac; in December the result was good on 12 trees, passable on 5, and poor on 8.

As will be seen, experimental work is meagre. This is due partly to the absence hitherto of any settled policy and partly to the fact that District Forest Officers have, as a rule, too much other work to do to be able to devote the attention necessary for systematic work on experiments. An instance of the lack of system in the past is the case of Mahogany which has been experimented with in a spasmodic manner for upwards of 44 years, but presumably no conclusion has yet been arrived at, and certainly although *Swietenia macrophylla* grows well in certain localities (e.g., Chenat Nair forest in Central Coimbatore) no attempt has been made to cultivate it on any scale. It is hoped that with the appointment of a local Sylviculturist matters will improve in future.

## CHAPTER V—ADMINISTRATION.

184. *Circle charge.*—Mr. H. A. Latham continued in charge of the Circle for the first half of the year. Mr. S. Cox succeeded him and remained up to the 31st May 1919, when he assumed the office of the Chief Conservator of Forests sanctioned for the Madras Presidency. From 1st June 1919, the charge was held by Mr. C. M. Hodgson. *Northern Circle.*

185. *District and Range charges.*—There were no changes during the year.

186. *Establishments.*—The sanction of the Secretary of State for India was received during the year for the reorganization of the executive and protective staffs of the department.

*Work and services.*

187. *Controlling staff.*—The paucity of Imperial officers, due to deputation to Military service, made it necessary to place important divisions under Provincial officers. The work of all Imperial and most Provincial officers was satisfactory. Messrs. H. J. McLaughlin and A. Raju Nayaker deserve special mention for good work.

188. *Executive staff—Rangers.*—The Rangers on the whole are reported to have worked satisfactorily. Special mention has been made of some of the Rangers for good work; of whom, the most outstanding are T. E. Varada Achari and C. S. King in connexion with the timber operations in *Ganjām*, P. Ramuni Menon for the management of the Vernacular Training school and S. Ramaswami Ayyar and K. V. Subba Rao for successfully conducting the prosecution of the proprietor of an estate in *Gōdāvari Lower* for demolishing cairns on the boundary of a forest.

*Punishments.*—Two of the four Rangers who were under suspension during the previous year were reinstated and the other two were dismissed. The services of one Ranger in *Kurnool East* were dispensed with, but he was reinstated on appeal and transferred to the Central Circle.

*Deputy Rangers.*—These have worked fairly well.

*Punishments.*—One Deputy Ranger was dismissed, one reduced and two were suspended.

189. *Protective establishment.*—The work and conduct of the staff except in *Ganjām* and *Vizagapatam* where it is reported to have been satisfactory and fair respectively, continued to be unsatisfactory.

*Punishments, Foresters.*—Two were dismissed, six suspended and six reduced. *Guards.*—Dismissals 6, removals from service 21, suspensions 34 and reductions 7. One Guard in *Kistna* was prosecuted for receiving illegal gratifications in connexion with a case of seizure and impounding of cattle, but was acquitted.

190. *Ministerial establishment, Divisional and Range offices.*—The work of the establishment was generally satisfactory. The general standard is low in *Kurnool East* and *South* divisions. Complaints are general regarding the difficulty of recruiting suitable candidates for junior clerkships owing to low pay and want of prospects. Favourable mention has been made of the head clerks of *Ganjām* and *Gōdāvari Lower* divisions. The head clerk of the *Kistna* division was suspended; one clerk in *Vizagapatam* was reduced; the Acting Accountant of *Kurnool South* was dismissed for gross neglect of duty; one Range clerk in *Kurnool South* was dismissed and the services of one in *Kurnool East* were dispensed with.

191. *Health of the establishment and casualties.*—The health of the establishment was as usual bad except in *Kistna* and *Kurnool West*; in the latter division it was not so bad as in the last year. Influenza caused 37 deaths. Fifteen subordinates died of malarial fever, six of cholera and two of other causes.

192. *Relations between Revenue and Forest officials.*—The relations continued to be cordial. None of the Forest officers except the Range officers in *Gōdāvari Upper* and *Kurnool South* attended the jamabandi of Revenue Divisional officers. It was not in practice in *Gōdāvari Lower*, *Kistna* and *Vizagapatam*. In *Ganjām*, the District Forest Officer was engaged in the preparation of working plan and the Rangers were not directed to attend as there were no important questions for decision. The non-attendance in the other divisions has not been explained, but there were no complaints or matters of importance to deal with.

193. *Service books.*—Maintained and verified up to date in *Vizagapatam*, and to the end of the calendar year in *Gōdāvari Upper* and of the financial year in the remaining districts.

194. *Tours of the Forest Member.*—The Forest Member visited *Kistna* and the *Kurnools*.

195. *Conservator's inspection.*—All the District Forest offices except the *Gōdāvaris* and *Kistna* were inspected with satisfactory results except as regards *Kurnool South* which was in bad order. The forests of *Ganjām*, *Gōdāvari Lower* and the *Kurnools* were also inspected and notes of inspections recorded except for *Ganjām*. The number of days spent in camp was 207.

196. *Touring of District Forest Officers.*—All District Forest Officers except the District Forest Officers of *Kurnool*, *East* and *South*, spent more than the minimum period on tour. The short touring in *Kurnool East*, was due to the charge having been held by the District Forest Officer, *Kurnool West*, for about five months, while that in *Kurnool South*, is attributed partly to the ill-health of the District Forest Officer and partly to his long stay at headquarters necessitated by the changes in the office establishment.

197. *Audit of accounts of the District Forest offices.*—The accounts of all the offices except *Ganjām* and *Gōdāvari Upper* were audited by the Local Fund Audit staff. The general results are reported to be satisfactory.

198. *Inspection of range offices.*—All the range offices except one in *Kurnool East* and all sale depots were inspected with generally satisfactory results.

199. *The Imperial Forest Research Institute and College.*—One probationer returned to the circle after passing the course, but was subsequently transferred to the Andamans. Two nominees to the Provincial service were deputed to undergo training.

200. *The Madras Forest College.*—Four students of the 1917–19 course secured the higher standard and two the lower standard certificates. One of the five students deputed for 1918–20 course was sent back as he was unable to follow the course. Five deputy rangers were selected for the 1919–21 course.

201. *The Vernacular Training School.*—The 1919 session of the school was held in *Ganjām*. The school started with thirty students (3 foresters and 27 guards) deputed from all the divisions. The conduct and health of the students with a few exceptions was satisfactory. One guard died of cholera and another of influenza. The results of the session reflect great credit on the District Forest Officer and P. Ramunni Menon, the senior instructor.

*Central Circle.*

202. *Circle charge.*—Mr. H. B. Bryant was in charge of the circle from 1st July 1918 to 2nd January 1919, Mr. H. F. A. Wood from 3rd January 1919 to 17th June 1919 and Mr. A. B. Jackson from 18th June 1919.

203. *District and Range charges.*—No change occurred in the number of district charges of the circle. Consequent on the handing over of the Sandur leased forests to the Sandur Darbar from 1st July 1918, the amalgamation of the Hospet range partly with Bellary and partly with Kudligi ranges which was under consideration was given effect to from 1st August 1919. A third range, i.e., Sriperumbudur range, was formed in *Chingleput* district with effect from 1st November 1918.

204. *Work of superior officers.*—The remarks of the Collector are given below :—

*Mr. J. I. Smith (Bellary).*—I have no remarks to offer.

*Mr. T. Raghavayya (Anantapur).*—Mr. Myer's work continued to be good.

*Mr. S. M. V. M Oosman Sahib (Guntūr).*—I assumed charge of the district on the 5th February 1919. The periods during which M.R.Ry. V. Raman Menon and Mr. D. L. Sathe worked under me are too short to express an opinion about their work.

*Mr. J. R. Krishnama (Nellore).*—Mr. V. N. Seshagiri Rao, the Extra Assistant Conservator, who was posted to this district continued to assist the District Forest Officer, in conducting the kancha sales and popularising the system and in helping the officer in his office and out-door work.

*Mr. A. Mc. Tampoe (Chingleput).*—Mr. S. V. Deva Dasan was in charge of the district up to 14th May 1919 and Mr. M. C. Chandy from 21st May 1919. The former possessed considerable local knowledge and influence which he utilized to advantage in his work. He was particularly interested in the kancha system, and has contributed materially towards its prospects of development. As Mr. Chandy has not been long enough in the year under review, I refrain from making any remark reagrding his work.

*Mr. H. G. Gharpurey, Collector of Cuddapah— North Cuddapah.*—It is satisfactory to note that the forests of this division have begun to be worked at a profit. Mr. Sundaram Ayyar takes keen interest in his work and his hope that they will continue to be worked so is probably well justified. *South Cuddapah.*—Mr. Master with his abundance of enthusiasm and energy is doing his best for the forest under his charge. *West Cuddapah.*—The report discloses progressive administration. Mr. Hanumantha Rao is a tactful and experienced officer and possesses the knack of taking work from his subordinates without unnecessary friction.

205. *Conservator's remarks.*—Having joined the circle only at the very end of the year I am unable to say much personally about the work of the superior officers. That it has however been good is evident from the great quantities of hay and other products supplied for war purposes. This put a great strain on all officers concerned and in all cases the work was carried out with zeal and efficiency.

206. *Executive staff.*—The conduct and work of rangers is reported to be satisfactory on the whole with a few exceptions. As regards deputy rangers their work is reported to be fairly satisfactory by all District Forest Officers except Guntūr and Nellore. The District Forest Officer, *Guntūr*, states that the deputy rangers show to a marked degree a lack of sense of duty and responsibility and that many of them start with a casual and temporary interest in their work and appear to have no other ambition than just to exist and to be allowed to continne on their present pay and the District Forest Officer, *Nellore*, is of opinion that the deputy rangers now joining the department are of an indifferent sort. It is to be feared that these criticisms are to a certain extent justified. The class of men recruited recently does not appear to be so good as it was some years back. It is to be hoped it will improve again with the advent of the reorganization scheme.

207. *Protective staff.*—The work and conduct of the protective staff was no better than in previous years. Here again, it is hoped a change for the better may result from the introduction of the reorganization scheme.

*Foresters.*—Two were dismissed, twelve suspended, two removed from service, seven reduced, twelve awarded black marks, one fined and four reverted.

*Forest Guards.*—Six dismissed, 48 suspended, 84 removed from service, thirteen reduced, 42 awarded black marks, one fined.

*Tannadars.*—Two suspended, one removed from service and three fined.

*Watchers.*—Seven suspended, 35 removed from service and two fined.

208. *Ministerial establishment.*—The work is reported to be satisfactory on the whole in all districts except *Anantapur* where the District Forest Officer complains the staff is below the average and unsatisfactory owing to frequent changes and to incompetent men being foisted to the Forest Branch. The Collector of the district demurs to this view and attributes it to the general inefficiency of the clerical staff

of the district which does not attract clever men from outside on account of its distance from Madras, its backwardness and its reputation as part of the Ceded Districts. The District Forest Officers of *Chittoor and South Cuddapah strongly* represent that on account of the short-handedness of the range clerical staff, work falls in arrears and attempts by the range officers to prevent such a state of affairs if ever done with any measure of success is done only at the expense of their duties in the field, a state of things which is to be greatly deprecated. If the Range and District Forest offices are to attract proper and efficient men it is high time that a satisfactory scheme is evolved for the reorganization of the clerical establishment of the Forest Department giving scope even to the Range clerks to rise to the highest posts when found efficient.

209. *Health of establishment and casualties.*—The health of the establishment suffered much on account of influenza. Two rangers, two foresters, eleven forest guards, nine watchers, two clerks, two permit-issuing officers and one tannadar have died of this epidemic. In *North Cuddapah*, two forest guards and one watcher succumbed to cholera. In Mamandur one forester died of cholera. The health of the establishment is reported to be indifferent in the three Cuddapah divisions on account of malaria, which tended to hamper the progress of work.

210. *Relations between Revenue and Forest officers*—continued to be cordial. In *North Cuddapah*, however, it is reported that the village officers at times did not co-operate with the forest subordinates, and they were reported to the Collector.

211. *Service books* were maintained and verified in all districts.

212. *Forest Commissioner's tour.*—The Forest Commissioner visited Madanapalle Range forests and Chittoor reserves in July 1918 and Chamala forests in March 1919; he also inspected the Palakondas and Gandikota of the West Cuddapah division and remarked on the damage done to the forests by fire and timber thieves and advised the closure of reserves to grazing for fire burnt areas.

213. *Conservator's inspection.*—All the district offices except *Guntūr, Bellary and Anantapur* were inspected before 30th June 1919. The last two have been inspected in July and August 1919 respectively. The forests of the Vinukonda, Rajampet, Mamandur and Sriharikota ranges and Duggarazupatam casuarina plantations have been inspected and inspection notes were submitted except for the last two.

214. *Touring of District Forest Officers.*—All the District Forest Officers spent more than the prescribed minimum period in camp except the District Forest Officers, Anantapur, Guntūr and Chingleput; in regard to Anantapur and Chingleput, the short touring was due to the illness of officers in charge and that in Guntūr to change of officers.

215. *Inspection of Range offices.*—All Range offices were inspected except Palnad of Guntūr, Sriharikota and Nellore ranges of Nellore district and Sathiavedu of Chingleput district.

216. *Audit of accounts of District Forest offices.*—The accounts of all offices except Bellary were audited by the Assistant Inspector of Local Fund Accounts and the general result was satisfactory.

217. *Imperial Forest College course, Dehra Dun.*—No probationer was deputed from this circle during the year.

218. *The Madras Forest College, Coimbatore.*—Seven deputy rangers and one acting ranger were deputed during the year; one of the deputy rangers was sent back being declared unfit to cope with the college course. Three deputy rangers returned with higher standard certificates and one with lower standard certificate.

219. *Vernacular Training School.*—The school was held this year in the *Chingleput district.* It opened with thirty students (eight foresters and twenty-two forest guards) but only twenty-eight actually underwent training, one left the school on account of domestic trouble and the other fell ill of eye complaint. The school was under the chief instructor of the previous year M.R.Ry. A. Ranganayakulu Nayudu and his assistant M.R.Ry. S. Chidambara Ayyar. The District Forest Officer states that the training given was in his opinion thorough and practical and the students were on the whole of an average class.

220. The headquarters of the Direction office was removed from Trichinopoly to Salem on 3rd December 1918. *Southern Circle.*

*Circle charge.*—The following officers were in charge of the circle during the year under report:—

Mr. P. M. Lushington from 1st July 1918 to 9th October 1918.
„ H. F. A. Wood „ 10th October 1918 to 30th December 1918.
„ H. A. Latham „ 31st December 1918 to 16th May 1919.
„ A. B. Jackson „ 17th May 1919 to 16th June 1919.
„ H. A. Latham „ 17th June 1919 to end of the year.

221. *Divisional charges.*—Proposals for the redistribution of the present two *Salem* divisions, the *South Arcot* and *Trichinopoly* divisions are awaiting the sanction of Government. It has since been found that some slight alterations to the proposals already submitted may be needed. In connexion with this redistribution proposals for the transfer of headquarters of one district from Cuddalore to Salem is awaiting Government sanction and a rented building has already been found for it. Certain reserves of *South Arcot* district were transferred to the control of the Collector of Tanjore in B.P. Forest Mis. No. 375, dated 22nd December 1916, but the transfer was only given effect to from 1st December 1918. The special working plan party was dispensed with from October 1918, no officer being available.

222. *Range charges.*—In *South Arcot* district, the Tirukkōyilūr range was amalgamated with Tindivanam and was named Gingee range from August 1918.

223. *Work of superior officers.*—The work of the district officers has been satisfactory. Mr. K. R. Venkataramana Ayyar has kept to his traditional keenness and has done very good work in connexion with sandalwood and bamboos.

Mr. Barry in Tinnevelly has also been doing useful work in connexion with the regeneration of *Balanocarpus utillis*, *Hopea parviflora*, *Gluta* and *Filicium*.

The work of Mr. Hearsey, Extra Assistant Conservator of Forests, in the investigation of spike disease in sandal has not been satisfactory due in part to ill-health and in part to slackness.

224. *Executive staff.*—The work and conduct of the Executive establishment was on the whole satisfactory.

Two rangers and six deputy rangers were suspended. The services of four deputy rangers were dispensed with, and one was dismissed. Many of the latter class find their work uncongenial and one fears at times unhealthy.

225. *Protective staff.*—The work and conduct of the protective staff cannot, on the whole, be called satisfactory. The reorganization scheme, sanctioned recently, may improve matters, though I fear in view of the recent increase in prices and wages, we must not expect too much.

There were 168 removals or dismissals, 155 suspensions, 5 reductions, 17 termination of services, and 9 resignations.

226. *Ministerial establishment.*—The work of ministerial establishment is said to be satisfactory except in four districts, North Vellore, West Vellore, North Salem and South Salem (Junior section). The difficulty seems to be due to want of prospects; for instance, in the Circle office there have been no permanent promotions since 1911. Range clerks are not on the Collectors' establishment lists, and though they start on Rs. 20, it can hardly be expected that they shall continue keen for the period of thirty years which must elapse before they earn their pension; moreover the work is intricate and takes time to learn.

227. *Health of the establishment.*—The health of the establishmeht was fair except in specially feverish localities, in West Vellore, North and South Salem, and Trichinopoly. Influenza however took a heavy toll.

228. *Casualties.*—One ranger, two deputy rangers, one forester, one range clerk, three guards, two watchers and one tannadar died of influenza. One guard died of snake bite; one deputy ranger, one forester, three guards and three watchers died of malaria; one guard and two peons died of cholera; one guard and one watcher died of Javadi fever; six guards and two watchers died of other causes.

229. *Relation between Revenue and Forest officers* continued to be cordial throughout the circle.

230. *Service books* were maintained and verified in all the districts.

231. *Conservator's inspection.*—All the District Forest offices were inspected during the year. The forests of Shevaroys and Pallipatti reserves of South Salem district were inspected by Messrs. Lushington and Wood respectively. Short notes on the latter were submitted to the Board.

The Javadis in South Vellore were also visited.

232. *Touring of District Forest Officers.*—All the District Forest Officers except South Vellore, West Vellore, North Salem and Tinnevelly spent more than the prescribed minimum period in camp. The short touring is satisfactorily explained and is due to ill-health and the holding of two district charges by one officer.

233. *Inspection of Range offices and sale depots.*—All the Range offices except one in Tinnevelly and all sale depots were inspected during the year by the respective District Forest Officers.

234. *Audit of accounts of the District Forest offices.*—The accounts of all District Forest offices except South Arcot and Madura were audited by the Assistant Inspector of Local Fund Accounts; the general result being 'satisfactory.' In South Arcot, the Assistant Accountant-General and Examiner of Local Fund Accounts is reported to have made test audit in April 1919 and no remarks were made by him.

235. *Imperial Forest College, Dehra Dun.*—No one was deputed.

236. *Madras Forest College, Coimbatore.*—Of the seven deputy rangers deputed for training, one obtained honours certificate, four higher standard and two lower standard. Six were deputed for 1919–21 course.

237. *Vernacular Training School.*—The school was located in Tinnevelly division and did good work under the Instructor Mr. B. R. Salisbury and his assistant Mr. A. P. Mckoy. There were thirty students, sixteen of whom obtained first class certificates and fourteen lower. The cost worked out to just over Rs. 225 per head. The report on the working of the school will be sent separately.

*Western Circle.*

238. Mr. C. D. McCarthy held charge of the circle till 11th May 1919 when he availed himself of two years' combined leave. Mr. H. Tireman, Acting Conservator of Forests, was in charge for the rest of the year.

*District and Range charges.*—There were no alterations during the year.

239. *Superior officers.*—The Conservator has not yet visited all the divisions of the circle and prefers not to make any remarks—which in the circumstances could not fail to be invidious—on the work of the superior officers.

240. *Executive establishment.*—The work of the rangers with a few exceptions is generally well reported on. Rangers Swamikutty, Nicholas and Myers are specially mentioned for good work by their respective District Forest Officers. One ranger retired from service, one ranger was temporarily reduced, and one probationary ranger resigned. The work of deputy rangers was on the whole fairly satisfactory. The services of eight were dispensed with and three resigned.

241. *Protective staff.*—The work and conduct of the staff with a few exceptions were not satisfactory.

*Punishments—Foresters.*—The services of four were dispensed with, six were reduced, eight were suspensed and one reverted. *Forest guards.*—The services of 28 were dispensed with, eight were reduced, twelve dismissed and 29 suspended.

*Ministerial establishment—Circle office.*—The work of the Conservator's office establishment was with the exception of that of one member satisfactory.

*Divisional and Range offices.*—The work of the establishment of the Divisional offices was generally satisfactory except in the case of *North Malabar* where three clerks were severely punished for bringing false charges against the head clerk. The head clerks of *Mangalore North* and *South Coimbatore* are specially mentioned for their good work.

*Range offices.*—The work of the Range office establishment is reported to be fair. Two additional range clerks were sanctioned—one for Mēttupālaiyam and the other for Tunacadavu ranges in *Central* and *South Coimbatore* divisions respectively.

242. *Health of the establishment and casualties.*—In common with the rest of the world the establishment suffered severely from influenza—three deputy rangers, two foresters, and 58 other ranks including permanent coolies dying of this disease. Malaria was as usual a scourge and must continue to be so until effective measures are taken to house the establishment in healthy situations. In former days—presumably in the sacred cause of economy—forest buildings were as a rule constructed as near as possible to swamps or streams in order to avoid the necessity of digging wells. A typical instance is the Tekkadi leased forests in which although forest work has been in progress for upwards of half a century *there is not a single well.* As the only water in the dry weather is that contained in the stagnant pools of a dried up river, it is scarcely to be wondered at that the place is terribly unhealthy. It would be interesting—if it were possible—to contrast the saving effected by not digging wells with the salary which Government has paid to men too sick to do any work and has consequently lost. The District Forest Officer is now digging wells in sites located by a 'diviner', good quarters are shortly to be built for the subordinates and coolies and it is hoped that matters will considerably improve at an early date. The Conservator is alive to the necessity for action in this important matter but progress most necessarily be slow and considerable outlay will be necessary.

*Casualties.*—One ranger, three clerks and two forest guards retired; two deputy rangers were invalided; and three deputy rangers, seven foresters and nineteen forest guards died. Several subordinates suffered much from fever and other ailments and a large number of subordinates have had to be granted sick leave.

243. *Relations between Revenue and Forest officers.*—The relations continued to be cordial and no complaints of any importance were brought to the notice of the Jamabandi officers.

244. *Service books.*—These were maintained for all subordinates on the permanent establishment and verified up to the close of financial year.

245. *The Inspector-General.*—Mr. G. S. Hart, C.I.E., Inspector-General of Forests, visited *South Malabar* and the *Nilgiris* inspecting the teak plantations at Nilambur and the eucalyptus plantations and Mudumalai forest in the latter division.

246. *Tours of Forest Member.*—The Hon'ble Mr. M. E. Couchman, Forest Commissioner, visited *South Malabar*, *Kollegal* and *North Coimbatore* divisions. He inspected the young teak plantations in *South Malabar* and the burnt areas in *North Coimbatore.*

247. *Conservator's inspections.*—All the District Forest offices except *North Malabar* were inspected. The Conservator inspected some of the forests in *Mangalore South*, *South Malabar*, *Central Coimbatore* and *South Coimbatore.* The total number of days spent in camp was 157.

248. *Touring of District Forest Officers.*—All the District Forest Officers except those of *South Malabar* and *Nilgiris* spent more than the prescribed period in camp.

249. *Audit of the accounts of the District Forest offices.*—The accounts of all the District Forest offices except *North* and *South Mangalore* were audited by the Local Fund Audit Department during the year. The results are reported to be satisfactory.

250. *Inspection of Range offices.*—All Range offices except three, one in the *Nilgiris*, one in *North Coimbatore* and one in *South Coimbatore*, were inspected during the year and the results are reported to be fairly satisfactory, except in *South Mangalore.* With the exception of those in *North Mangalore* all the sale depots and forest tram line depots were inspected and they were reported to be in good order.

251. *Madras Forest College.*—One deputy ranger passed the college course with honours, two others with higher standard certificates and one with lower standard certificate.

Six deputy rangers were deputed to the college for 1918–20 course.

252. *Imperial Forest Research Institute and College.*—One probationer for the Provincial Forest Service was deputed to the college after probationary training in *South Coimbatore.*

The senior Provincial class of the college under Mr. R. Bourne, Imperial Instructor, toured in *South Malabar* and *Nilgiris* districts.

253. *The Vernacular Training School.*—Of the 24 students that remained at the close of 1918 session in the *Nilgiris*, thirteen secured first-class and eleven second class certificates. This year's session was held from 15th January to 10th June 1919 in *South Mangalore* division and subordinates from *Mangalore North* were also deputed for training. The number deputed from both the divisions was twenty, of whom one did not join and his services were subsequently dispensed with. Out of the remaining nineteen students, seven secured first class certificates and the rest second class.

## CHAPTER VI.—GENERAL.

*Northern Circle.*

254. *Realization of revenue from the usufruct of toddy-yielding trees, etc.*—The revenue realized from this source was Rs. 33,665 against Rs. 33,642 in the previous year.

255. *Supply of forest produce to meet the wants of people.*—Coupes in several places were opened in all divisions except *Gōdāvari Upper* and sold to contractors from whom people obtained their requirements of fuel and bamboos without complaints. In *Gōdāvari Upper*, the supply from unreserved lands was adequate for the local demand. The removal of fuel from the Mangrove forest of Kandikuppa and Coringa in *Gōdāvari Lower* by fishermen at fixed rates was, as usual, continued. Owing to distress, the fishermen were exempted from paying fees, and the hillmen in Rampa were allowed to remove bamboos on payment of half the seigniorage rate for a period of three months. In *Kurnool East* and *West*, small timber, building materials, agricultural implements and bamboos were collected departmentally by employing *Chenchu* labour, and were sold to the public; the arrangements for the supply in the latter division are reported to be inadequate and steps have since been taken to ensure the continuous supply of small timber and fuel to the bordering villages.

### Forest Committee's recommendations.

256. (*a*) *The formation and working of panchayats, Kistna.*—Four reserved forests covering an area of 5,589 acres were managed by panchayats. They were inspected by the District Forest Officer during the year and found to have been managed satisfactorily. *Kurnool East*—Yerragondapalem reserved forest (9,054 acres) was managed by panchayat which is reported to have worked well. *Kurnool South*—The management of Yadavada reserved forest (1,142 acres) by panchayat was sanctioned during the year, but was not brought into force until the close of the year. *Kurnool West*—The sanction for the panchayat management of Gundlakonda reserved forest (4,476 acres) was not given effect to pending the revision of grazing fees.

(*b*) *Opening of small coupes for rural supply wherever an effective demand exists or can be stimulated into existence.*—In *Gōdāvari Upper*, the necessity for opening such coupes does not exist, the supply from unreserved lands being enough. In *Kurnool South*, the opening of coupes is said to be impossible owing to the remoteness of the forests from the centres of demand. In *Kurnool West*, nothing was done. In *Kistna*, one small fuel coupe in Jaggayyapeta forest was opened and leased to meet the requirements of Panchamas. An attempt to open two fuel coupes of fifty acres each in *Kurnool East* failed for want of demand. There was no demand for such coupes in the other divisions as the coupes sold to contractors and unreserved lands met the local demand.

(*c*) *Measures adopted for improving the water-supply in Government grazing grounds and the facilities for grazing and pasturage.*—No special measures are required in *Ganjām*, *Vizagapatam* and *Gōdāvari Upper*, where there is ample supply of water near grazing grounds. Two tanks in each of *Gōdāvari Lower* and *Kurnool East* and one in *Kurnool South* were repaired at a cost of Rs. 330, Rs. 587 and

Rs. 250, respectively. Troughs were also constructed in *Kurnool East* at a cost of Rs. 60 for watering cattle. One well was sunk at a cost of Rs. 323. Nothing was done in *Kistna* and *Kurnool West* owing to financial stress.

(*d*) *System of patrol by a gang of subordinates.*—The system of patrol under one patrol officer over several beats was in force in *Vizagapatam* and in the *Kurnools* and is reported to have worked satisfactorily except in *Kurnool West* and in one of the ranges of *Kurnool East*. The failure in *Kurnool West* and *East* was due partly to the insufficiency of the staff and partly to the large extent of areas allotted to each gang. The system was not introduced in *Ganjām*, and in the *Gōdāvaris*. The beat *cum* gang system which was adopted in *Kistna* worked fairly well.

### Rules under the Forest Act.

257. (*a*) *Timber transit rules.*—The rules in all divisions are reported to have worked satisfactorily.

(*b*) *Rules under section* 26 *of the Forest Act.*—The rules are reported to have worked satisfactorily with no abuse of the privileges. In *Ganjām*, the free removal of reserved and classified trees under two feet in girth from unreserved lands was allowed as a famine relief measure and the concession was appreciated. The unreserved lands to the extent of 427 square miles in *Gōdāvari Upper* and nine square miles in *Kistna* were under the control of the Forest Department.

(*c*) *Other rules.*—The rules under the Forest Act for the management of the estates in *Vizagapatam* and *Kistna* and the rules for the transport of timber on the river Gōdāvari, etc., and for the collection and disposal of drift timber in the *Gōdāvaris* are reported to have worked well.

258. *Hill tribes—Ganjām.*—The *Khonds* were, as usual, engaged in the general and fire protection of forests and in return allowed free grazing and removal of dry fuel and minor produce for their domestic consumption. Some of the *Khonds* were also given presents in the shape of rice, cloth, cheroots, etc., in recognition of their good services. The hill tribes in *Vizagapatam* availed themselves of the privileges conferred on them without complaints. In the case of a few hill villages, the privileges had to be suspended owing to the apathy of the people in the matter of protection of forests from thefts of timber and fire. The *Gōdāvaris*—The *Koyas* and *Reddis* in the *Upper* division were engaged in clearing fire lines and protecting forest from fire and paid wages for the labour and rewards on the results of protection. The same tribes in the *Lower* division were, as usual, employed on the general and fire protection of forests and on the construction of roads and buildings and the demarcation of forests. They were granted rewards for successful protection of forests from fire and allowed also concessions to graze their cattle free and remove free forest produce for their consumption. *Chenchus* of *Kurnool.*—In the *East* division, the *Chenchus* were employed mostly on exploitation and protection of forests. With some exceptions, they are reported to have behaved fairly well. The amount of wages earned by them during the year was Rs. 20,417. In the *South* division they were regularly employed by the department as fire patrols. Some were also engaged by the lessees in extracting bamboos. It is reported that a gang of Chenchus from some of the refractory gudems in the *East* and *West* divisions committed several dacoities and robberies in the *South* division and caused several fires which burnt a vast extent of forests in one of the ranges. In the *West* division, the *Chenchus* are a source of trouble, worry and anxiety, and a special commission has since inspected the worst gudems with a view to improving matters.

259. *Cultivation in reserved forests.*—The District Forest Officer, *Ganjām*, has not dealt with the results of the dry cultivation by the *Khonds* to whom lands in Kriamba reserved forest were assigned last year. In *Kurnool East*, the *Chenchus* continued to cultivate 67 acres free of assessment and 115 acres on an annual assessment of two annas per acre assigned in the previous year. Twenty-five acres were assigned during the year for cultivation by the *Chenchus* of Tokapenta. The cultivation of 38 acres by *Sugalis* and 12 acres by the police *talaiyaris* was continued. Twelve acres were also granted during the year for cultivation by the police *talaiyaris*. The assignees are to render service in extinguishing fires and preventing the commission of offences. In *Kurnool West*, 18 acres of land in Pecheruvu and 37 acres in Bairluti ranges were

cultivated and sown with horsegram by employing *Chenchu* labour; the harvest in the former area is reported to be 339 Madras measures, while that in the latter has not been reported.

260. *Mining and quarrying.*—In *Kurnool West*, three licences for prospecting barytes—one in Betamcherla reserved forest and two in Kolumulapalli unreserved land—were granted during the year; 1,500 tons are reported to have been removed from the former area.

### Live and Dead Stock.

261. (*a*) *Elephants.*—The elephant in *Vizagapatam* was transferred to the Agency department. Six elephants were maintained for baggage. The condition and health of the two elephants in *Ganjām* is reported to be indifferent and of the others in *Gōdāvari Upper* and *Kurnool West* fairly good.

(*b*) *Other animals.*—Six pairs of buffaloes were purchased in *Ganjām* for dragging logs. The casualties of the year were: eight buffaloes in *Ganjām* were given as rewards to the *Khonds*, three died, one was killed by a tiger, two asses and one buffaloe in *Kurnool East* were sold and one bullock in *Kurnool West* died. The balance of stock at the end of the year was 24.

(*c*) *Inventory of valuable stock.*—Stock registers were maintained and verified at inspections.

(*d*) The value of the live and dead stock at the close of the year was Rs. 12,954 and Rs. 3,81,599 respectively.

262. *Rain gauges.*—Readings were recorded in all the stations. For the sake of safety, some of the gauges in *Vizagapatam* and *Kistna* were removed and located at places which the subordinates could reach easily and inspect frequently.

263. *Suits.*—The civil suit against the Government which was pending last year in *Gōdāvari Lower* in connexion with the imposition of fine under the River Timber Transit rules was decided in favour of Government and the plaintiff has appealed; the appeal was pending. A civil suit for the possession of certain lands included in Kovvada and Kopalli reserved forests in *Gōdāvari Lower* preferred by the proprietor of Gangole estate was pending.

*Central Circle.*

264. *Realization of revenue from the usufruct of toddy-yielding trees on Government wastes and poramboke lands.*—Rs. 82,606 were realized during the year against Rs. 91,976. The decrease was chiefly in *Bellary* and *Guntūr*.

### Rules under the Forest Act.

265. *Timber Transit rules* are in force in *Guntūr*, the three divisions of *Cuddapah* and *Chittoor* and are reported to have worked satisfactorily. During the year these rules were extended to the whole of *West Cuddapah* and *Chittoor* districts and as a result of the same there was more effective check than in previous years. The offences committed under these rules in the *West Cuddapah* were thirty-eight against fifteen in the previous year and the increase was due to greater check exercised consequent on the better supervision of the controlling officers.

266. *Rules under section* 26 *of the Forest Act* are reported to have worked satisfactorily and no complaint or abuse has been brought to light.

In regard to tangedu, the District Forest Officer, West Cuddapah, states that the bark is growing in importance for tanning purposes and that contractors who lay out large amounts on leases do not obtain the full benefit from the shrubs in unreserved lands which are at present freely removed for manuring purposes and he recommends that this shrub should be declared a reserved tree and thereby protected. The Collector points out that only the leaves are to be removed for manuring purposes and he does not think that it is necessary to declare the shrub a reserved tree. This is true but the privilege of removing leaves is much abused and is a constant source of trouble to contractors.

267. *Inventory of valuable stock.*—The stock registers are reported to have been maintained and verified in all the districts. The confusion noted in the stock of articles in Nellore in the previous year's report were all set right during the year and steps have been taken to dispose of all the old and unserviceable stock.

268. *Rain-gauges.*—Were maintained in all districts except Anantapur and Chingleput and readings were recorded. Two rain-gauge stations were opened in South Cuddapah—one at Kodivengammabhavi of Kodur Range and the other at Thummalabylu in Rajampet Range.

269. *Cultivation in reserved forests with a view to afforestation.*—In Guntūr district 15,850 acres of Bapatla Block III, 130 acres of Ipurpalem Reserve and 178·71 acres of Nizampatam coupes 5 and 6 were leased for cultivation for 15 years in accordance with Board's Proceedings Forest Mis. No. 214, dated 6th June 1915 for raising fuel plantations. In West Cuddapah district, the Gandlur tope given on 30 years' lease is being used by the lessees; besides, the several plots assigned to the Police talayaris are also properly kept, while in Nellore district a small portion of Amancherla is given to Ghat talayaris and the department receives a small rent on it.

270. *Measures adopted to encourage the growth of manure leaf yielding plant.*—No special measures were adopted during the year. In spite of the enhancement of fees on manure leaves in the West Cuddapah division the drain on the forests has not been entirely put a stop to and this will not be done until the issue of permits is altogether stopped.

271. *Specimens.*—In West Cuddapah district specimens of the fruit of the two different species of *Terminalia Chebula* were collected for experimental purposes while in South Cuddapah district 2 lb. of Red Sanders seed were sent to the Imperial Sylviculturist for experiment; 2 long and 2 short Red sanders pannels and 2 long Thamba pannels were also supplied to the Gass Forest Museum.

All the products collected and supplied to the Controller of Munitions, Tan Stuffs, etc., are shown below :—

| Description of produce. | Candies. | lb. | Description of produce. | Candies. | lb. |
|---|---|---|---|---|---|
| Hay .. .. .. .. | 2,978 | 1,387 | *Hardwickia binata* billets | 1 | 110 |
| *Anogeissus latifolia* bark .. | 4,435 | 391 | Leaves of *Carrissa spinarum.* | .. | 378 |
| Do. leaves .. .. | 35 | 229 | | | |
| Gotti fruits *Zizyphus xylopyra.* | 45 | 149 | Tangedu bark *Cassia auriculata.* | 1,028 | 341 |
| Bees'-wax .. .. .. | 3 | 99 | | | |
| *Phyllanthus emblica* .. .. | 1 | 354 | Red-wood .. .. .. | | 1,120 |

272. *Suits.*—In *South Cuddapah* the High Court set aside the order passed by the District Judge, Cuddapah, in connexion with the suit against the first bidder of Pamuleru Coupe II. It is remanded for further enquiry and stands posted to 24th August 1919. In *West Cuddapah*, the question of raising the amount of award in the case of Putlampalle shrotriyam claimed by the Shrotriyamdars is still pending in the District Court. In *Nellore*, the suit filed by the Shrotriyamdar of Turravaripalem for the possession of compartment 29 of Rapur Velingondas was declared to have abated by the death of the plaintiff and the area was notified under Section 4 in Board's Proceedings Forest Mis. No. 105, dated 10th February 1919 and the settlement is in progress. The two claims relating to the Udayagiri Velingondas were withdrawn, as the available records are unfavourable to Government. In *Chittoor*, there were no civil suits in the year. There were 2 criminal cases against the forest subordinates and both of them were decided in favour of the department.

273. *Live Stock.*—There were three buffaloes in *Chittoor* district at the beginning of the year maintained for gardening purposes at Horsleykonda camp. One of these an old animal past work was killed by a tiger and the others are looked after by the local staff. There is no other live-stock maintained in the circle.

274. *Mining.*—In *Anantapur*, no new licences for prospecting for gold, etc., were given. Applications of Mr. Ghose and Sesha Reddi for prospecting for Barytes in the Nirjampalli Reserved Forest are under consideration. In *West Cuddapah* no prospecting licences were issued for mining but an offer for extracting stealite (soap stone) was received and as it was found profitable to lease out the area in the consideration of the limited extent where it occurs, it was leased out during 1919-1920 for Rs. 100-4-0. In *Nellore*, mica mining is allowed in reserves but the revenue derived thereby is credited to Land Revenue since April 1918.

## Recommendations of the Forest Committee.

### (a) *Classification of Forests.*

275. The classification is complete in all districts. In *Chittoor* district 17 Reserves (3 partly in classes I and V, 13 in Class V and 1 in class IV) were re-classified and ordered to be placed in class I in Board's Reference No. 2698/18–1, dated 19th February 1919.

### (b) *Constitution of forest panchayats.*

276. During the year two panchayats were newly formed in Guntūr district. Three panchayats were resumed in Bellary district, one dissolved in Guntūr and 15 in Chittoor district. Thimmapuram reserve in Bellary district has been recommended for disafforestation as no village was willing to take it up for panchayat management. As a special annual report on the working of the panchayats is separately submitted to Government by the Chief Conservator of Forests, there seems no necessity to go into this matter in detail in this report. The panchayats are reported to have worked satisfactorily on the whole in all districts except Chingleput and Chittoor, where the District Forest Officers are of opinion that the working is hardly satisfactory. The Collector of Chittoor writes as follows :—" We abolished all the panchayats except one in the year because we now want to keep the reserves in which most of them were located to grow sandal in, and this means that all grazing in them must be stopped. The opinion of the Revenue Officers of this district, as the result of the experiments made with panchayats in the last few years, is not nearly so unfavourable as that of the forest officers. We believe that if the areas under panchayat administration have not been particularly well managed, they have at any rate, not been worse managed than those under the Forest Department. It is notorious that goats browse in the reserved areas with the connivance of forest subordinates and that illicit felling is common, and that fires commonly occur. The late District Forest Officer proposed to enhance the grazing fees in the Pulikonda reserve, which contains the only remaining panchayat area, on account of fires. I am instructing the Revenue Divisional Officer to make an enquiry into the cause of the fires and to report whether they could not be prevented if the whole of the Pulikonda reserve were parcelled out into panchayat areas. I am very far from being of opinion that the panchayat experiment ought to be abandoned".

In West Cuddapah district, with a view to induce the villagers to take up the management of one block, proposals to enhance the grazing fees were submitted and sanctioned in G.O. No. 1347, dated 14th July 1919.

### (c) *Opening of fuel coupes for rural supply.*

277. In all the districts coupes were opened wherever there is demand and they were generally leased out to contractors for felling as usual. In *North Cuddapah* district as the price of fuel at Proddatur had gone up to a prohibitive rate, proposals are being made to supply fuel from the Lankamalais and Nallamalais at fixed rates at the road side. In *Nellore* district coupes are being opened wherever there is a local demand sufficient to induce a contractor to undertake the felling. The population however get much of their fuel from shrotriyam and zamindari lands and from unreserved lands and there is therefore little demand for fuel from forest reserves. As there is now a demand for fuel for mica mining a working scheme for the forests adjoining these mines is under preparation.

### (d) *The patrol system.*

278. The special patrol system is in vogue in the three *Cuddapah* districts and in one of the ranges of the *Chittoor* district and is reported to have worked satisfactorily. The protection of the reserves are all reported to be good on the whole.

### (e) *Inducement to villagers to aid in forest conservancy.*

279. The kancha system of grazing already in existence in three reserves of *Guntūr* district and the whole of *Nellore and Chingleput* districts is working satisfactorily. In Bellary the grazing fees in Harpanahalli range were enhanced to As. 8 per cow unit. The District Forest Officer, South Cuddapah, contemplates opening pentas in the Seshachellam reserve under the forest village or kancha system. In view of the great damage done by pentas in the past on these hills, this is a

project which I view with much suspicion. In *West Cuddapah* district the grazing fees on Sugali cattle were enhanced to Re. 1 per cow unit with a view to introduce the village system. In *Nellore* the right of free removal of grass originally given to the villagers at the foot of the Yerragondas and Veligondas was cancelled and the hills were closed as a punishment. The closure had the desired effect with the result that the number of fires was reduced greatly.

*(f) Improvement of water-supply and grazing facilities in Government grazing-grounds (B.P. Forest No. 125, dated 29th June 1914).*

280. *Guntūr.*—Permission was granted for repairing eleven existing kuntas and one well and for constructing three new kuntas and one well for the benefit of cattle grazing in reserves.

*North Cuddapah.*—Only one well near Peddabhavi (Nallamalais) of the Porumamilla range was repaired at a cost of Rs. 50. One bund across the stream in Nallamalais near Balappabhavi rest house, one in Kancherlamoram reserve of Vonipenta range were constructed free of cost, similarly five bunds in Gopavaram, Ganugapenta and Kancherlamoram reserves and in Lankamalais and Thurupukondas of Badvel range and two bunds in Vaneswaram stream in Lankamalais of Sidhout range were also constructed free of cost by the forest subordinates during 1919. One Mr. Govindarajulu of Ganganapalle was permitted to dig a tank in Nallamalai reserved forest of Porumamilla range; the same was completed during 1918–19; *South Cuddapah.*—The supply channel to Thummalabylu kunta in Seshachellams of Rajampet range was repaired at a cost of Rs. 138. Gurutlabhavi in the same range was repaired at a cost of Rs. 18. Stone walls were built around Mangalavanibhavi, Boddeddulabhavi and Kanchunuthulabhavi at a cost of Rs. 27. One Mr. A. Chenchireddi of Nagavaram village was permitted to repair at his own cost as public charity the wells in Kuntakona and Ippalakona. The works are progressing. *West Cuddapah.*—Three water-sources in the Palakondas were repaired at a cost of Rs. 156. Kadikonabhavi which has a perennial supply has been protected by constructing a platform against the rush of foul water from the adjoining stream. In Kanamalopalle a well has been repaired by a private individual to improve the water —supply. *Nellore.*—Two ponds one in Kanigiri and the other in Rapur Range were repaired free of cost by the villagers. *Chingleput.*—The ponds in Valluvapakkam and Selayur reserves were repaired at a cost of Rs. 30 and Rs. 42–5–0 respectively. For the improvement of the grazing-grounds in the six special grazing working circles of Chingleput Range prickly-pear and thorny growth were removed departmentally in order to endeavour to increase pasture in accordance with the provisions of the working-plan.

*(g) Sale of plantations.*

281. In *Anantapur*, tree growth on 472 acres of reserved forests in Pamidi and Khojjepalle, in *Guntūr*, 230 acres of casuarina plantations and *in South Cuddapah*, 108 acres of Upparapalle plantation were sold for Rs. 6,230, Rs. 12,504 and Rs. 3,024 respectively. In *Nellore* the casuarina plantations on the coast were not disposed of as the prices offered were low. The Dugarazupatam plantation was re-sold as the original purchaser failed to pay the kist regularly.

282. *The War work* carried out during the year was: in addition to the supply of hay referred to in the previous chapters 'Anogeissus bark' supply was continued; a list of other kinds of produce sent to the Controller as detailed in the paragraph under 'Specimens'.

283. *Realization of Revenue from the usufruct of toddy yielding trees.*—Rs. 14,541 was realized under this head during the year against Rs. 15,352 of previous year. The decrease is small. The fixed fee system continued to be in force in all the districts except Madura and Tinnevelly. In Tinnevelly, the acquisition of 1,494 palmyras in the Kudiraimoli Teri reserved forest was sanctioned during the year and the amount of compensation is under settlement. The acquisition of 546 patta palmyras in Kaliavur reserve has been ordered to be proceeded with. *Southern Circle.*

284. *Measures adopted to encourage the growth of manure leaf-yielding trees and shrubs.*—Nothing was done by the department in this direction. Removal of green manure from reserved forests has been forbidden except in the Nanguneri Range of Tinnevelly district.

285. *Grant of cowles for the formation of casuarina plantations in sandy areas.*—Nil.

286. *Cultivation in reserved forests.*—Last year's leases were renewed in South and West Vellore, North Salem (except two) and South Salem (except one) and in Trichinopoly. The cultivation of lands under muchilikas with cardamom, coffee and plantains continued on the Palnis in Madura district.

287. *Improvement of water-supply in State Forests.*—In *North Vellore* one well was repaired at a cost of Rs. 23 and 215 bunds were constructed at a cost of Rs. 247.

In *South Vellore* the investigation into the question of the supply of good drinking water on the Javadis by a system of tube wells was continued during the year. The boring operations at Komuttiyeri and Mandapparai were completed during the year. The water obtained from the bore holes at these places was sent to the Guindy Institute for examination and was pronounced satisfactory. The construction of tube wells and the laying of pipes were therefore taken up and the work was completed at Komuttiyeri while that at Mandapparai was nearly completed. The tube well at Komuttiyeri was formally opened by the Conservator in March 1919, and was named "The Lushington Well" after Mr. P. M. Lushington, the late Conservator. Boring operations at Veerappanur were taken up and completed during the year, an estimate for the laying of pipes is awaited from the Agricultural Engineer. Boring with the hand boring set was found to be impossible at Nadanur and the work was therefore stopped pending the completion of the Amerdi Nadanur road for facilitating the transport of the Power Drill. The amount spent during the year on investigation and construction are given below :—

| | RS. |
|---|---|
| Investigation .. .. .. .. .. .. .. | 529 |
| Construction .. .. .. .. .. .. .. | 1,371 |

In *West Vellore* the boring for a tube well at Naickeneri was successfully completed with the Power Drill during the year at a cost of Rs. 448. The bore hole has yet to be fitted with pipes and a pump. The construction of another tube well at Kuttathur is going on after five unsuccessful attempts. A sum of Rs. 456 has been spent on these borings during the year. The shaft has gone down to 47 feet and promises to be equally fruitless. Altogether an amount of Rs. 904 has been spent on tube wells during the year.

Three departmental wells and seven village wells on the hills were repaired at a cost of Rs. 72-4-5 and Rs. 84-8-0 respectively, while the District Board has been good enough to give a contribution of Rs. 1,000 for improving the water supply and sanitation of the Malayalee villages, out of which three protected wells have been sanctioned for Rs. 900 and an amount of Rs. 142-10-7 spent thereon during the year. Owing to the difficulty of getting skilled labour on the hills, more work could not be done. The seven village wells repaired were very useful during the last drought in supplying men and cattle with water on the hills. The thanks of the department are due to the District Board for their timely help in the matter. A step well in the Alangayam Range was also repaired at a cost of Rs. 8 for the benefit of cattle resorting to the reserve of the same name.

In *South Arcot* three tanks were repaired at Rs. 46.

In *South Salem* 152 bunds were constructed at a cost of Rs. 76 in the Karungal stream and its affluents on the Chitteries.

In *Trichinopoly* 22 bunds were constructed at Rs. 32.

In *Madura* one well was repaired at a cost of Rs. 36 in Pappanmalai reserve.

In *North Salem* and *Tinnevelly* no expenditure was incurred.

288. *Supply of Forest produce to meet the wants of the people.*—This was attended to generally by coupe contractors in accordance with the terms of their agreements. The system of issuing permits for babul trees required for agricultural implements was continued in Tinnevelly.

289. *Sale of fuel at the edge of the forests.*—Was attended to by the contractors. In most districts their operations aim at the supply of fuel to centres of population; the local residents getting their supplies from "Unreserved lands" and patta holdings.

290. *Arrangement for the transfer of sale depot to private Agency.*—The only departmental sale depots are for sandalwood and there is no intention of transferring these to private agency.

291. Free removal of grass is dealt with in Chapter II.

292. *Hill tribes.*—The Javadi forest village scheme continued to work well in South and West Vellore divisions and the Malayalees did a considerable amount of co-operative work in securing protection of large sandal areas. In North Vellore a revised scheme for Thellali forest village system has been prepared by District Forest Officer and is under correspondence.

The Malayalee village system on the Chittries was not as good as in previous years owing to failure of rain and the prevalence of epidemics. The forest village system was introduced in the Kollimalais of Trichinopoly district and is reported to have produced some good results.

All these people suffered very severely from the influenza epidemic.

293. *Prospecting licence.*—Nil.

294. *Timber and Sandalwood Transit Rules.*—The rules are reported to have worked satisfactorily in those districts where they are in force. Six cases connected with the removal of sandalwood were prosecuted, five ended in conviction, and one is still pending.

295. *Rules under section 26 of the Forest Act* are reported to have worked well and there were no complaints except in Trichinopoly where it is reported that much damage was done by felling and burning unreserves for "ponakad kumeri" cultivation on the hills where the village officers take little interest in preventing or detecting cases.

296. *Control of unreserves by the Forest Department—West Vellore.*—The 32 hill villages in the Tiruppattur Javadis continued to be managed by the department. The work of delimitation, assignment of unobjectionable lands for cultivation on patta and the extinction of all sivaijama cultivation on the Tiruppattur Javadis, was vigorously pushed on with from July 1918 and during the year 31 out of 32 hill villages (10,229·23 acres = 15·98 square miles) have been practically surveyed and settled. A length of 74 miles of delimitation boundary was cut and 1,371 cairns were erected during the year at a cost of Rs. 118-15-9. An amount of Rs. 3,597-1-5 was collected during the year as land revenue assessment as against Rs. 3,894-15-2 of the previous year and Rs. 3,124-12-4 of the year previous to it. There were no remissions and the Malayalees seem happier under the present management as there is a fixity in the demands and their grievances can be more promptly attended to by the departmental officers who are constantly on the hills. The ledger accounts, etc., prescribed in G.O. No. 116, Revenue, dated 16th January 1917, were maintained.

The unreserves on the Kollimalais and Pachamalais in Trichinopoly district are to some extent under the control of the Forest Department but no formal transfer of control has been effected.

In Tinnevelly district the control over the babul coupes yet to be felled in the tank beds remained with the Forest Department.

297. *Rules regarding the levy of compounding fees* were observed.

298. *Arrangement made to hold the villagers adjacent to particular forests responsible for the protection of those forests by dividing the village and blocks of forests concerned.*—Sanction of Government was received for the introduction of the forest village system in Tiruvannamalai range, South Vellore division, from 1st July 1919. (G.O. Mis. No. 1122, Revenue, dated 5th June 1919, embodied in Chief Conservator's Mis. No. 342, dated 11th June 1919.) Modified forest village system was introduced into the Malayalee village of Mambakkam on the plains (Board's Proceedings Forest Mis. No. 271, dated 7th May 1919) in West Vellore division.

*Madura.*—This system was brought into force in the year under report in case of reserves of Sholavandan, Ayyalur, Natham and Palni Ranges under the new grazing scheme sanctioned for these ranges during the year and it may have improved.

the protection of forests considering the number of fires which occurred during the year under report in these four ranges, viz., 36 fires burning 2,945 acres against 63 fires burning 6,203 acres in the previous year though from a personal inspection made after the close of the year I find a good deal of illicit removal going on.

### LIVE AND DEAD STOCK.

299. *Inventory of valuable stock.*—Stock registers were maintained and verified in all districts. The value of the dead stock in the circle at the end of the year was Rs. 4,18,755 against Rs. 4,37,632 in the previous year. There is no live-stock in this Circle.

300. *Rain gauges* maintained and readings recorded in all stations.

301. *Specimens—North Vellore.*—Wood and bark specimens of several species have been collected and sent to the Madras Forest College. A small sample of *Hemicyclia sepiaria* timber was sent to the Mathematical Instrument Office, Calcutta, for testing it for the manufacture of Mathematical Instruments and report has since been received that the wood though not so good as box-wood is suitable for their requirements and a small order has been placed.

*South Arcot.*—One panel of *Dalbergia paniculata* was sent to the Gass Museum, and some specimens of barks.

*Tinnevelly.*—Specimen planks of the following species were sent as noted against them.

One plank of *Gulta travancorica* was sent to the Forest Economist, Dehra Dun, and two to the Gass Museum. Wood specimens of *Cadaba trifoliata* were sent to the Gass Museum, Coimbatore. Botanical specimens of the natural order *Dipterocarpus* were sent to Dehra Dun.

### SUITS.

302. *South Salem.*—The appeal regarding the ownership of the Neyyamalai hills referred to in last report is still pending.

*Trichinopoly.*—Government won the appeal preferred in the suit brought by Kulitalai pattadar.

*Madura.*—In the suit filed by K. Peddan Chetty reported as pending last year, title to the land was decreed in favour of Government who had however to pay for the improvements.

There were no new suits during the year.

### INSPECTION OF FRONTIER BOUNDARIES.

303. During the year, the Madura-Travancore boundary from Kumili to Teveram west of Kombai, was inspected and found to be in no good order. The clearing and perambulation of this boundary has been discontinued in G.O. No. 2859, Revenue, dated 3rd August 1918, as the Travancore Darbar was opposed to any clearing.

304. *Recommendation of the Forest Committee—Classification of reserves.*—This is complete in all the districts except for the Tirumanur extension reserve of *South Salem* district for which no classification is necessary as it is only a field acquired under Land Acquisition Act and settled subsequently under Forest Act in October 1916 and for 6 reserves in *Trichinopoly* district. There has been some re-classification in *South Arcot* district during the year. (Board's Proceedings Forest Mis. No. 168, dated 10th March 1919; Mis. No. 236, dated 10th April 1919).

305. *Forest Panchayats.*—Twenty-six new panchayats in all were formed during the year, all districts except *Trichinopoly* and Tinnevelly contributing.

Detailed report on the working of panchayats will be submitted by Collectors separately in due course.

306. *Patrol system.*—This system was continued in *North Vellore*, *South Salem* and in one Range in *Trichinopoly* and the working is said to be unsatisfactory.

307. *The War works carried out during the year.*—Lance staves and *anogeissus* bark and leaves, and bees-wax were also supplied. Owing to the control of collection of the bark of *Cassia auriculata* and other materials having been transferred to the Controller of Tanning Stuffs, the department received in revenue the average of five years previous to war considerably to the benefit of the war expenditure.

308. *Realization of Revenue from the usufruct of toddy-yielding trees, etc.*—The revenue realised from this source was chiefly in the two *Mangalore* divisions and amounted to Rs. 2,142 against Rs. 1,630 in the previous year. *Western Circle.*

309. *Supply of forest produce to meet the wants of the people.*—The wants of the people in the matter of fuel are adequately met by departmental operations in the *Nilgiris* and at *Mangalore* and elsewhere by the sale of fuel coupes to contractors. As a rule sufficient small timber to meet local demands is obtained from the fuel coupes. Poles for use as cart brakes on the ghat roads in *North* and *South Coimbatore* are supplied departmentally.

310. (*a*) *The working of the Forest Panchayats.*—A new Panchayat was formed in *Central Coimbatore* and the area brought under its management was 639 acres the assessment imposed being Rs. 30 per annum.

The areas managed by Panchayats are given below :—

| District. | Number of reserved forests managed by panchayats. | Area in acres. | Assessment imposed. | Number of panchayats managing the areas. |
|---|---|---|---|---|
| | | | Rs. | |
| Mangalore North .. .. .. | 1 | 89·34 | .. | 1 |
| Central Coimbatore .. .. .. | 9 | 6,883·35 | 1,249 | 15 |
| South Coimbatore .. .. .. | 6 | 3,438·83 | 485 | 3 |
| Total .. | 16 | 10,411·52 | 1,734 | 19 |

In *South Coimbatore* the District Forest Officer reports as follows regarding the Dalavoipatnam Panchayats: "The protection of these areas is reported to be highly satisfactory. The Panchayat entertained a temporary gumasta on a monthly salary of Rs. 10 and 3 watchers for Rs. 16 per month to look after the Reserves. A stud bull for breeding was also maintained for six months of the year at a cost of Rs. 60.

"During the year under report 1,047 bulls and cows and 34 buffaloes were permitted to graze in these four Reserves. The rates of grazing fees charged were twelve annas and Rs. 1-8-0 per bull and buffaloe respectively. The revenue realised on this account was Rs. 836-4-0. Besides, Rs. 51 was realised by sale of withered trees. Areas are reported to be overgrazed. The following improvements were done by the Panchayats during the year under report: (1) Removal of prickly-pear in Dalavoipatnam and Ganapathy Reserves at a cost of Rs. 299-15-0.

*Note.*—There are still more areas covered with prickly-pear in Ganapathy Reserve which if cleared will throw open additional areas for grazing.

"(2) A well has been dug in Dalavoipatnam Reserve at a cost of Rs. 153 to afford water for grazing cattle.

"(3) The boundaries of Dalavoipatnam Reserve were cleared by subordinates free of cost."

Other District Forest Officers report unfavourably on the work of Panchayats.

*Unreserves.*—Two patches of unreserved land measuring 639·72 acres in Udipi Range of *Mangalore North* and the Andiyur Unreserve (2,570 acres) in *North Coimbatore* were also under the management of the Panchayat and the work of these Panchayats is reported to be unsatisfactory.

311. (*b*) *Measures adopted for improving the water-supply in Government grazing grounds and facilities for grazing and pasturage.*—Nothing was done. The only place where any action appears to be necessary is *North Coimbatore* and here works will be carried out in the current year.

312. (*c*) *System of patrols by a gang of subordinates.*—Two new patrol sections were formed chiefly for patroling sandal areas in *North Mangalore* division and a few cases were detected by them. The system was continued in one Range in *North Coimbatore* but the District Forest Officer makes no remarks regarding its working. In *Central Coimbatore* the system was a failure for want of capable men.

313. *Rules under the Forest Act*—(*a*) *Timber Transit Rules.*—The rules worked satisfactorily. The modification of the new rules in *South Malabar* and the framing of revised rules for *Kollegal* and *North* and *Central Coimbatore* divisions are under consideration.

314. *Rules under section* 26 *of the Forest Act.*—The rules worked satisfactorily.

315. *Other rules.*—The Sandalwood Transit Rules continued in force in *Kollegal* and *North Coimbatore* and generally worked well. Certain modifications in the Sandalwood Transit Rules of South Kanara have been proposed and the matter is pending final decision. The Fishing Rules in the *Nilgiris* were slightly modified and re-notified for another year.

316. *Hill tribes.*—In most divisions attempts were as usual made to induce these unsatisfactory people to settle and to work for the department. The chief of these were the opening of two schools in *North Coimbatore* for Sholagas and Uralis, the allocation of a small reserve in *South Malabar* to the Mulcers. leases of lands either free or at a nominal rent in *North*, *Central* and *South Coimbatore* to various tribes, and in the last-named division, the opening of a bazaar where the Mulcers can buy food at less than cost price.

317. *Cultivation in Reserved Forests.*—In the *Nilgiris* an area of 1,029·20 acres included in Northern Hay and Singara Reserved Forests in Sigur Range was handed over to the Cinchona Department for Cinchona planting. The old Kasuba settlement at Anaikatti of 345 acres in extent was leased out to Messrs. Steel and Clementson for experimental Cambodia cotton cultivation. For the rest the leases were much the same as in the previous year. It scarcely seems worthwhile printing a detailed list.

LIVE AND DEAD STOCK.

318. (*a*) *Elephants.*—The capturing operations were carried out in *South Mangalore*, *North* and *South Malabar*, the *Nilgiris*, *South Coimbatore* and *Central Coimbatore.* Forty-seven elephants were captured, *North Malabar* contributing 18 and the *South Coimbatore* 16. Two were born in *North Malabar* and one in the *Nilgiris.* Eighteen were sold for Rs. 42,660, 11 died, 2 were shot and a young calf was killed by a tiger, surely a unique occurrence. Three elephants were killed by the fall. The condition of the elephants is generally satisfactory though the Conservator has in some cases noticed signs of overwork. The number remaining at the end of the year was 124, against 106 at its commencement.

319. *Other live-stock—Bullocks.*—Twenty-three were purchased during the year, 5 were sold and 17 died or were killed 11 dying of rinderpest. The number in stock at the end of the year was 51. *Buffaloes.*—Fifty-nine were purchased; 1 was sold and 8 died or were killed. The number in stock at the end of the year was 104.

(*c*) *Veterinary Establishment.*—Mr. F.X. Mascarenhas inspected the live-stock in all the districts and advised on the treatment. His work was satisfactory as was also that of the *South Coimbatore* Veterinary Assistant. The appointment of an additional Veterinary Assistant with headquarters at Gudalur was sanctioned and the appointments of both the Veterinary Assistants were made permanent.

(*d*) *Inventory of valuable stock.*—Stock registers were maintained and verified at inspections. The value of live-stock and stores at the close of the year was Rupees 3,72,862 and Rs. 4,20,827 respectively.

320. *Rain gauges.*—Maintained in all the divisions and readings recorded.

321. *Suits.*—There were no suits of any importance.

C. M. HODGSON,
*Conservator of Forests, Northern Circle.*

A. B. JACKSON,
*Conservator of Forests, Central Circle.*

H. A. LATHAM,
*Conservator of Forests, Southern Circle.*

H. TIBBEMAN,
*Conservator of Forests, Western Circle.*

# ADMINISTRATION REPORT OF THE MADRAS FOREST COLLEGE, COIMBATORE, FOR THE YEAR 1918–19.

## CHAPTER I.—CONSTITUTION.

### (1) *Staff.*

Mr. F. L. C. Cowley-Brown held the post of Principal throughout the year.

Mr. Dawson was the Imperial Instructor and Messrs. E. M. Crothers, Abd-ul-qadir and Abd-ul-karim, the First, Second and Third Provincial Instructors, during the college year. Mr. W. C. Hart vacated the post of Second Provincial Instructor on 17th July 1918 and shortly afterwards was commissioned as Second Lieutenant in the Indian Defence Force. Mr. R. B. Cornwell, on his return from active service with the 64th and 81st Pioneers in East Africa and Persia, was attached to the staff from 16th June 1919.

With the opening of the joint dispensary on 8th July 1918, the sub-assistant surgeon permanently attached to the college was taken away. Two sub-assistant surgeons were attached to the college only during the touring season.

Mr. J. E. D'Cruz, senior sub-assistant surgeon, joined duty on 28th September 1918 and remained attached to the college till 10th June 1919. Mr. P. M. Sridharan, the second sub-assistant surgeon, joined on 30th September 1918 and remained till 4th February 1919. These officers gave instructions in first aid and camp hygiene to both the divisions.

The students were taught gymnastics and drill by the college havildars.

In headquarters lectures on first aid were delivered to the senior division by the sub-assistant surgeon in charge of the joint dispensary and also by Mr. D'Cruz, the college medical officer.

### (2) *Board of Visitors.*

The Forest Commissioner was ex-officio President of the Board of Visitors till 1st June 1919 on which date the Chief Conservator took charge. Mr. H. A. Latham was on the board throughout the year. The following officers were on the board for the period noted against each :—

| | |
|---|---|
| The Hon'ble Mr. S. Cox ... ... | 10th December 1918 to 31st May 1919. |
| Mr. P. M. Lushington ... ... | 1st July 1918 to 18th November 1918. |
| Mr. C. D. A. McCarthy ... ... | 1st July 1918 to 12th May 1919. |
| Mr. H. B. Bryant ... ... | 1st July 1918 to 2nd January 1919. |
| Mr. H. F. A. Wood ... ... | 19th November 1918 to 17th June 1919. |
| Mr. H. Tireman ... ... ... | From 13th May 1919. |
| Mr. A. B Jackson ... ... | From 18th May 1919. |
| Mr. C. M. Hodgson ... ... | From 1st June 1919. |

## CHAPTER II.—RESULT OF EXAMINATIONS.

The Board of Visitors met on 20th June 1919 and remained till 30th June 1919 on which date the prizes and certificates were awarded.

Twenty-eight students sat for the final examination. The following is the list of successful candidates in the order of merit showing the certificates awarded and prizes gained :—

| Name of student. | Name of circle or State to which attached. |
|---|---|
| *Honours.* | |
| 1. T. D. Ponnayya ... ... ... ... ... | Southern Circle. |
| 2. P. Sankunni Menon ... ... ... ... ... | Western Circle. |
| *Madras Ranger, Higher.* | |
| 3. C. N. Narasimha Achari ... ... ... ... | Central Circle. |
| 4. Y. Peddalakshmayya Nayudu ... ... ... | Northern Circle. |
| 5. B. S. Chengappa ... ... ... ... ... | Coorg. |
| 6. E. S. Wambeck ... ... ... ... ... | Ceylon. |
| 7. C. L. Narayana Rao ... ... ... ... ... | Mysore. |
| 8. C. R. Raghunathan ... ... ... ... ... | Southern Circle. |
| 9. A. N. Srinivasalu Nayudu ... ... ... ... | Do. |

*Madras Ranger, Higher*—cont.

| Name of student. | Name of circle or State to which attached. |
|---|---|
| 10. P. Ramaswami Ayyar ... ... ... ... | Southern Circle. |
| 11. M. Umapati Mudaliyar ... ... ... ... | Northern Circle. |
| 12. N. C. Mahadevan ... ... ... ... ... | Central Circle. |
| 13. M. Gulab Singh ... ... ... ... ... | Western Circle. |
| 14. A. Joseph ... ... ... ... ... ... | Northern Circle. |
| 15. Abd-ul-hamid Khan ... ... ... ... | Hyderabad. |
| 16. T. D. Rajabadar ... ... ... ... ... | Southern Circle. |
| 17. Molcolm Edward ... ... ... ... ... | Hyderabad. |
| 18. C. B. Chengappa ... ... ... ... ... | Coorg. |
| 19. A. Seshagiri Rao ... ... ... ... ... | Mysore. |
| 20. K. Purushottama Rao ... ... ... ... | Central Circle. |
| 21. B. Coates ... ... ... ... ... ... | Western Circle. |
| 22. M. Subba Rao ... ... ... ... ... | Northern Circle. |

*Madras Ranger, Lower.*

| | |
|---|---|
| 23. Kunhiraman Menon ... ... ... ... | Western Circle. |
| 24. Behara Bhagirathi ... ... ... ... ... | Northern Circle. |
| 25. Y. Venkataswami Nayudu ... ... ... ... | Do. |
| 26. T. G. Sitarama Mudaliyar ... ... ... ... | Central Circle. |
| 27. C. R. Tangavelu Mudaliyar... ... ... ... | Southern Circle. |
| 28. T. V. Thayuman ... ... ... ... ... | Do. |

*Government and other prizes.*

| | |
|---|---|
| 1. Campbell Walker Prize for the best all-round ranger. | B. S. Chengappa (Coorg). |
| 2. Brasier Prize for the best out-door ranger. | Abd-ul-hamid Khan (Hyderabad). |
| 3. Best second year student (Gold medal) ... | T. D. Ponnayya. |
| 4. Silver medal for honours ... ... ... | T. D. Ponnayya.<br>P. Sankunni Menon. |
| 5. Best second year student (Forestry) ... | T. D. Ponnayya. |
| 6. Lodge Prize for the best student in Engineering. | T. D. Ponnayya. |
| 7. Best second year student (Survey) ... ... | P. Sankunni Menon. |
| 8. Do. (Range Administration). | T. D. Ponnayya. |
| 9. Indian Forest Prize for past students ... | L. J. Taylor (1912—1914). |
| 10. Do. for present students ... | E. S. Wambeck (Ceylon). |
| 11. Fischer Prize for Gymastics ... ... ... | D. Venkateswarulu (junior student). |
| 12. Principal's prize for Botany ... ... | C. R. Ragunathan. |

Mr. P. Kesavaswami Ayyar, L.M.S., Assistant to the District Medical and Sanitary Officer, delivered five 'refresher course' lectures on first aid to the students of the 1917—1919 division. Lieut-Col. C. F. Fearnside, the District Medical and Sanitary Officer, and his Assistant conducted the final examination both written and oral in that subject. Fourteen students succeeded in obtaining the St. John's Ambulance certificates.

The 1918—1920 division students started with 33 on the rolls. Before the commencement of the second year, three men were withdrawn under rule 24 of the College Calendar, leaving thirty to start on their second-year course.

The final examination in physical science for the 1918—1920 division was held in June 1919. G. Appa Rao of the 1918—1920 division won the Board of Visitors' gold medal for the highest first-year student.

Messrs. Tireman, Wimbush, F. J. Marshall, D. L. Sathe and K. R. Venkataramana Ayyar were the examiners for the final examinations. The orals were as usual supervised by the Board of Visitors.

The senior division was up to the standard of previous years. While no student showed exceptional brilliancy, the tail was above the average and there were no failures.

The examiners' reports as a whole were favourable especially in forestry (the most important subject). Certain suggestions will be given effect to as far as possible during the coming year.

The lack of text-books in range administration and engineering has been a serious hindrance in the past, but their compilation has been entrusted to Messrs. Venkataramana Ayyar and Crothers under the supervision of the Principal and completion may be expected at an early date.

Students' plates were bound at the end of the course and returned to them: but drawings of very exceptional merit are retained and hung on the college walls.

Greater attention is being devoted during headquarter terms to practical work for which special facilities are now provided by the Demonstration Forest and Engineering Park. Each division has put in about six hours per week in manual and practical operations outside the lecture room.

Sergeant Jones of the Central Recruit School examined the students in gymnastics. The examiner reported that the students as a whole performed the exercises satisfactorily. Selected students gave a gymnastic display before the Board of Visitors.

After the distribution of prizes and certificates on 30th June, a garden party was held in the Ornamental Park. It was attended by a considerable number of old students and by many guests from Coimbatore.

## Chapter III.—Touring, Health, Conduct and Administration.

The touring season commenced at the beginning of October as in the previous year, the students returning to headquarters for ten days at the beginning of November for the periodical examinations.

*Programme of touring.*—Owing to the Acting District Forest Officer having informed the Principal at the eleventh hour that a visit to Mount Stuart would by reason of the influenza be attended by grave risk, it was necessary at the last moment to alter the programme and to exclude Mount Stuart.

*Senior division.*

*October.*—Komuttiyeri (Javadi hills)—Marking for felling under improvement method. Special tending of sandal trees; thinnings in bamboo experimental plots. Forest village system was studied in detail. Sandalwood forest depot was visited and stock checked. Study of the transport system.
Examination of the flora of the plateau. Demarcation of sample plot and special tending area.

*November-December.*—(South Malabar)—Stem analysis of teak. Intermediate and final thinnings. Study of teak natural forest.
Investigation of the flora of the locality.
Construction of single lock bridge, cantelever bridge, road construction.

*January.*—Waliar (Central Coimbatore)—Marking of standards. Inspection of fire and guide lines—study of regeneration by root suckers, enumeration of sample plots, calculation of volume of a coppice with standard forest at different ages, taking the mean average increment to be constant. Study of the flora.
Construction of fuel slide.
Practice trials.

*February.*—Sadivayal (Central Coimbatore)—Marking of standards and preparation of working-plan report; inspection and burning of guide and fire lines.
Botany excursions.
Road construction, boundary rectification.
Combined practice trial.

*April-May.*—Bandyshola (Coonoor)—Ringing of blue gum trees, method of working of eucalyptus for fuel and for charcoal.
Mossing of eucalyptus seedlings, measurements of height and girth of trees—charcoal manufacture in permanent kilns, study of eucalyptus oil distilling factory.
Economic felling of eucalyptus trees.
Study of natural orders of shola species and examination of shola forests.
Study of labelled trees in Sim's Park.
Final survey examination. Inspection of the main College road and check of gradients.

The hearing of forest cases was attended at the Magistrate's court in headquarter terms.

*Junior division.*

*October.*—Waliar (Central Coimbatore)—Harvesting and marking of standards, analysis enumeration of sample plot, road alignment, practice in contouring, road repairs, survey of coupes, and chain survey of college camping ground.

*November-December.*—(South Malabar)—Thinning in teak plantation and extraction, study of young plantation, natural forest, enumeration and volume calculation, study of soils, marking and felling for thinnings, inspection of clear felled forest.

Visits were paid to a rubber estate, Kallai tiles factory; fish cannery; saw mills; Calicut furniture company; Dutt's oil mills; Soap works; and cocoanut tope. Repairs to road works. Timber dragging and rafting. Construction of culverts; alignment of roads; inspection of buildings under construction, and of laterite quarry; blasting rocks under water; inspection of Nilambur Range office records and visit to Beypore Government department.

*January.*—Mundanthorai (Tinnevelly district)—Study of *Hardwickia binata* and of experimental thinned and unthinned plots; artificial regeneration; study of effect of ringing trees over natural growth in ever green forest; sylviculture of teak, volume calculation; alignment of roads; reducing gradients in zig zags; check measurement of Ranger's quarters under construction.

*February.*—Sadivayal (Central Coimbatore)—Construction and burning of charcoal kiln inspection of sandal nursery, *Dalbergia latifolia* and *Pterocarpus Marsupium* dibbled area, cutting of fire lines, dibbling sandal seed; freeing natural regeneration; burning fire lines; survey of coupes and of the college camp, road improvement; alignment of roads with Ceylon ghaut tracer; combined practice trial. The camp at Sadivayal was for both divisions simultaneously. The difficulties that prevailed in previous years here manifested themselves once more.

*April-May.*—Aramby (The Nilgiris)—Enumeration and demarcation of sample plots height and girth measurement of blue gum trees thinnings, ringing and marking of eucalyptus examination of named trees in Government gardens checking and correcting the compartment limits checking the boundaries of the reserved forest with section 16 notification and alignment of cart road.

The students did not attend the elephant sale as it was not held at Waliar but at Pattambi.

As usual all operations on tour have been recorded in the College tour journals. Extracts of special notes being communicated through the Conservators to the District Forest officers concerned. The College tour journals were typed. Both divisions suffered severely from indifferent and inefficient havildars.

Fifty-six students passed in swimming. The thanks of the College are due to Messrs. Bourne, Barry, Longrigg and Venkatarama Ayyar for the trouble taken by them to render the camps comfortable and advantageous. The discontinuance of the Waliar and Sadivayal camps has been recommended.

The Inspector-General of Forests visited the College on 1st December 1918 and the students of both the divisions at Nilambur on 14th December 1918.

The Senior Provincial Service class from Dehra Dun under Messrs. Bourne and Kanji Lal visited the College on February 21st. The students were accommodated in the hostels.

*Health.*

Nearly all cases were treated by the College Sub-Assistant Surgeon Mr. D'Cruz. In spite of influenza the health of the College on the whole was very satisfactory during the year. Mr. D'Cruz by his medical discipline prevented quite as much as cured sickness.

The College continued to receive its supply of dairy produce from the Agricultural College. The provision stores and the fuel depot opened last year have proved to be of benefit to the students residents on the estate.

With a very few exceptions the conduct of the students has been uniformly good. Both the physique and discipline were well up to the standard of previous years.

Of the 18—20 division, Government students who were retained after their first year—

| | | |
|---|---|---|
| 9 | joined with | good characters. |
| 6 | ,, | satisfactory characters. |
| 6 | ,, | fair ,, |
| 1 | ,, | moderate ,, |
| 2 | ,, | very moderate ,, |
| 1 | ,, | bad ,, |

At the meeting of the Board of Visitors held on 27th and 28th July presided over by the Chief Conservator of Forests recommendations amongst others were passed to the effect that—

*Water-supply.*—(*a*) The municipal well should be acquired at once.

(*b*) A windmill should be purchased without delay.

(*c*) Construction of rain water tanks should be undertaken urgently.

II. The following programme of touring should be adhered to commencing on or about November 1st :—

| | | |
|---|---|---|
| *November*— | | |
| *Senior division* | Komuttiyeri, Javadis. | |
| *Junior* ,, | Nilambur. | |
| *December* | *Senior division* | Nilambur. |
| | *Junior* ,, | Nedungayam. |
| *January* | *Senior division* | Karagudi. |
| *February* | *Junior* ,, | |
| *April 8th—May 18th*— | | |
| *Senior division* | Bandishola. | |
| *Junior* ,, | Arambi. | |

III & IV. *Calendar.*—Necessity for students bringing bicycles should be entered in the Calendar. Botany should be a major and working plan a minor subject.

V. *Accommodation.*—The estate overseer should remain in his present quarters. The Curator should occupy the sub-assistant surgeon's house.

VI. *Telephones.*—Internal system for the estate should be undertaken at once : to be linked with Coimbatore offices, etc.

VII. The museum should be extended by wings.

VIII. The two Provincial officers' quarters should be improved by the addition of a large room on each side.

Eight other subjects were referred to the Principal for settlement between the Principal and the Chief Conservator.

## Chapter IV.—The Gass Forest Museum—College and Students' Libraries.

Mr. G. Viswanatha Ayyar continued to be the Curator throughout the year. Besides the improvement made in the arrangement of exhibits the museum was further remodelled on the additional experience gained by the Principal's visit to Dehra Dun to attend the meeting of the Board of Forestry held in the last week of March, where he read a paper on 'Suggestions for future Forest Colleges'. The existing building is too small to admit of further developments being made in the matter of the arrangement of the present exhibits, or of the accommodation of future contributions. The majority of the panels in the museum were polished by an expert from Calcutta. The printing of the Herbarium catalogue was sanctioned during the year. A new sandal tree was erected in the place of the old one which was earmarked for the Dehra museum. Models of the various sylvicultural systems were constructed at the College carpenter's shop. These coupled with the diagrams and models received from Dehra will afford valuable assistance in working and studying the Demonstration Forest on the College Estate.

The surroundings of the museum were improved.

About 19,080 people (excluding Madras Forest College students) as against 12,800 last year and 10,600 the previous year have visited the museum. Some of the Students' utilization and Herbarium specimens were presented to the Madras Presidency College at the request of the Professor of Botany.

The contributions to the museum were many and included—

About 400 botanical specimens by Mr. S. Abdul Qadir.

One wild dog's skin—Mr. C. S. Wilson.

One bison head—Mr. L. J. Taylor.

One model of a timber slide with sledge and turn table—Imperial Forest Research Institute and College, Dehra.
Model showing arrangement for checking velocity of sleepers—Imperial Forest Research Institute and College, Dehra.
Nine photographs of models of sylvicultural methods—Imperial Forest Research Institute and College, Dehra.
Six photographs of plantations—Mr. C. E. C. Fischer.

Thanks are due to the large number of District Forest officers and Range officers who contributed panels, barks, etc., to the museum.

His Excellency Lord Pentland visited the College and museum in July 1918 in company with certain zamindars; the latter were accommodated in the hostels.

### General Library.

Two hundred and ninty-three books were added, of which 20 were presented by Mr. C. E. C. Fischer, 18 by Mr. C. B. Dawson, 7 by Mr. C. Sreenivasa Rao.

### Students' Library.

Two hundred and fourteen books were added, of which

| | | |
|---|---|---|
| 123 | were presented by | Mr. F. A. Lodge, C.I.E. |
| 5 | ,, | Mr. P. M. Lushington. |
| 4 | ,, | Mr. C. B. Dawson. |
| 6 | ,, | Mr. R. D. Richmond. |
| 1 | ,, | Mr. R. B. Cornwell. |
| 7 | ,, | Mr. E. M. Crothers. |
| 1 | ,, | the District Forest officer, Nellore. |
| 13 | ,, | Mr. C. Sreenivasa Rao. |

Owing to the liberality of Messrs. Lodge, P. M. Lushington and Richmond, the College library now contains a complete set of Indian Foresters.

A large number of magazines were sent periodically to the Military hospital at Secunderabad.

## Chapter V.—Water-supply, planting roads, buildings, etc.

On the 6th March 1919, Mr. Ramaswami Ayyar, Dehra Dun ranger (retired), was appointed estate overseer on Rs. 50 salary in place of Mr. N. Hanumantha Rao on Rs. 25. An area of nearly 6 acres round the main building of the College was converted into an ornamental park in which many varieties of trees, etc., were planted. The seedlings were obtained from the Agri-Horticultural Gardens, Teynampet, Madras. The thanks of the College are due to the Superintendent, Mr. Houghton, and to the College overseer for the interest taken in the selection of the plants and for the efficient arrangements for their immediate dispatch to Coimbatore.

Two thousand and four hundred trees were planted, of which 1,200 were reserved for the ornamental park, 200 for the new avenues, and 1,000 to replace casualties. Creepers and ornamental shrubs put down in the previous year were maintained at considerable expense.

The college is still under the same disability as before as regards an insufficient water-supply. The water available from the Public Works Department cistern amounts to about 4,800 gallons per day; the deepening of the present engine-well undertaken last year resulted in but a very trifling increase to the daily supply. Owing to the laying out of the ornamental park, nearly double the quantity previously considered sufficient for planting is required and this has to be obtained by hand-carts at very great expense. All residents on the estate suffer grievously from the lack of water.

The obvious remedies have been hanging fire now for five years. The Dhobie Khana built in 1917 at a cost of Rs. 1,800 cannot, for this reason, yet be made use of.

The full requirements of the college during headquarter terms amount to about 14,000 gallons per day of pumped water, unless the rainfall is plentiful.

Students' and servants' gardens were started on the estate during the year.

For the students' blocks displaying the best gardens, prizes were awarded. The improvements on the estate have been mainly due to the exertions and tact of the present overseer.

Mr. Arnot—water diviner, located underground streams in the estate. Owing to the want of a powerful hand pump, the capacity of the spring in the bore well dug on Mr. Arnot's advice to augment the present insufficient water-supply has not been yet definitely ascertained.

The college is indebted to many District Forest officers and Range officers for their contributions of seed, etc.

The following works were started by the Public Works Department :—

(1) Construction of a set of quarters for sweepers (since completed).
(2) Construction of the 11th hostel block.
(3) Construction of separate latrines for the clerks.
(4) Construction of masonry drain behind the clerks' quarters.

Certain new paths were laid out and many old paths were converted into metalled roads by the college contractors.

Peacocks, jungle fowl, spurfowl, partridges and quail supplied by rangers K. Venkataramanan and A. B. Fenn have been put on to the estate.

Government sanctioned a subsidy of Rs. 2,000 for the construction of the students' club. The actual cost of construction is estimated at Rs. 5,000. Rupees 1,590 have been so far subscribed in cash. Promises have been received for a considerable sum in addition.

## Chapter VI—General.

The stock of college was checked in detail in July 1918, and irregularities and defects brought to light were remedied.

The office was inspected by the Principal in March 1919.

*The work of the office establishment.*—The account work of the office continued to be satisfactory as evidenced by the Accountant-General's review and credit is due to Mr. S. Krishnaswami Ayyangar, the College Accountant.

With the development of the college the work of the store-keeper has now become complex and many-sided. The pay sanctioned is consequently inconsistent with the onerous duties and responsibility involved. The work of Mr. A. Marudachalam Pillai, the store-keeper, has, on the whole, been satisfactory. During headquarter terms, the calls on his time and energy are incessant. With the supervision of the library and the carpenter's shop, his duties now are more than can be adequately performed by one man.

With the exception of two typists who were removed, the other clerks have, as usual, worked willingly and well.

The post of the Head Clerk of the College has been converted into that of Manager on Rs. 60-2-80. The Manager Mr. Doraiswami Ayyar has shown a rare capacity and devotion to duty during the year, and his promotion was well-deserved. For him and in a lesser measure for all the clerks, long overtime has been a normal experience.

The Imperial Instructor Mr. Dawson proceeded on two years' furlough immediately after the close of the year. He was instructor at the College continuously without leave from April 1914 till 3rd August 1919.

His enthusiasm for the college and his affection for the students were throughout his service at the College unstinted and ungrudging.

The engineering park was extended and furnished with a fuel slide, turn table and sledge, shears and derricks.

The two Engineering Provincial Instructors were deputed in July to the Sappers and Miners school at Bangalore to undergo a short refresher course.

In July 1918, the Principal was deputed to Madras to study the Museum and the Gardens of the Agri-Horticultural Society.

To the Second Indian War Loan, the students subscribed Rs. 5,100.

*Athletics.*—For the first time, since the starting of the college the athletic sports were held in the college grounds on the estate.

The Richmond cup was won by Senior Student C. B. Chengappa (for the second time) who at the end of the year was also awarded the Pentland Shield (also for the second time) for proficiency in athletics.

The Marathon race ($6\frac{1}{2}$ miles hill and plain) was run at Sadivayal, Junior Student Narayanaswami Ayyar being the winner.

The Inter-Division cup for this race presented by the late Risaldar Major Ameer Mahomad Khan was won by the juniors.

The Inter-Division Hockey cup was also won by the juniors, who were defeated by the seniors in the Inter-Division Football match. The record of wins and losses was about the average.

All members of the staff displayed a commendable zeal in the discharge of their duties. A special word of praise is due to Mr. Crothers who carried out with his usual efficiency during the period under review the varied and manifold responsibilities of house tutor.

MADRAS FOREST COLLEGE, COIMBATORE,
*3rd September* 1919.

F. COWLEY-BROWN,
*Principal.*

*Administration Report*, 1918-19.—Summary of revenue and expenditure for the forest year 1918-19.

| Head of service. | Amount. RS. | A. | P. |
|---|---|---|---|
| *Receipts.* | | | |
| I (*d*) ... ... ... ... ... ... ... ... | 178 | 10 | 6 |
| II (*d*) ... ... ... ... ... ... ... ... | 155 | 0 | 0 |
| V (*b*) ... ... ... ... ... ... ... ... | 11,112 | 3 | 5 |
| Total ... | 11,445 | 13 | 11 |
| *Expenditure.* | | | |
| Refunds ... ... ... ... ... ... ... | 47 | 8 | 0 |
| A.—*Conservancy and Works.* | | | |
| A (vi) (*c*) ... ... ... ... ... ... ... | 3,722 | 2 | 0 |
| A (vii) (*a*) ... ... ... ... ... ... ... | 3,248 | 3 | 4 |
| A (vii) (*b*) ... ... ... ... ... ... ... | 1,327 | 13 | 11 |
| A (vii) (*c*) ... ... ... ... ... ... ... | 2,228 | 10 | 1 |
| A (viii) (*e*) ... ... ... ... ... ... ... | 4,838 | 14 | 5 |
| A (viii) (*g*) ... ... ... ... ... ... ... | 1,806 | 11 | 7 |
| A (ix) (*c*) ... ... ... ... ... ... ... | 1,955 | 14 | 3 |
| Grain compensation allowance ... ... ... ... | 15 | 0 | 0 |
| Total ... | 19,143 | 5 | 7 |
| *B.—Establishment.* | | | |
| B (i) (*b*) ... ... ... ... ... ... ... | 43,663 | 3 | 9 |
| B (i) (*c*) ... ... ... ... ... ... ... | 29,566 | 8 | 5 |
| B (i) (*d*) ... ... ... ... ... .. ... | 4,017 | 3 | 3 |
| B (i) (*e*) and grain compensation allowance ... ... | 5,285 | 6 | 0 |
| B (ii) (*b*) ... ... ... ... ... ... ... | 6,058 | 2 | 6 |
| B (ii) (*c*) ... ... ... ... ... ... ... | 1,892 | 3 | 0 |
| B (ii) (*d*) ... ... ... ... ... ... ... | 1,000 | 3 | 11 |
| B (iii) (*b*) (1) ... ... ... ... ... ... | 18 | 0 | 0 |
| B (iii) (*b*) (2) ... ... ... ... ... ... | 9,298 | 2 | 11 |
| Total ... | 1,00,299 | 1 | 9 |
| Total, A and B ... | 1,19,442 | 7 | 4 |

Abstract showing the live-stock, stores, stools, etc., for the year ending 30th June 1919.

| District. | Description of stock. | On hand at the commencement of the year. Number. | Amount. RS. A. P. | On hand at the end of the year. Number. | Amount. RS. A. P. | Difference in value in favour of the year. RS. A. P. | Difference in value against the year. RS. A. P. |
|---|---|---|---|---|---|---|---|
| Madras Forest College, Coimbatore. | Surveying and other instruments. | 1,651 | 6,828 13 2 | 1,941 | 5,365 10 7 | .. | 1,463 2 7 |
| | Tools .. .. | 488 | 472 4 7 | 503 | 247 5 7 | .. | 224 15 0 |
| | Furniture .. .. | 1,506 | 25,771 3 0 | 1,529 | 23,694 3 5 | .. | 2,076 15 7 |
| | Tents .. .. | 148 | 2,475 1 9 | 146 | 4,428 4 6 | 1,953 2 9 | .. |
| | Uniforms of accoutrements. | 97 | 297 15 11 | 82 | 291 7 9 | .. | 6 8 2 |
| | Scientific apparatus. | 1,591 | 954 11 9 | 1,542 | 913 15 0 | .. | 40 12 9 |
| | Photographic apparatus. | 9 | 504 6 0 | 9 | 429 8 4 | .. | 74 13 8 |
| | Gymnasium apparatus. | 9 | 417 14 4 | 9 | 412 7 8 | .. | 5 6 8 |
| | Machinery (oil-engine, etc.) | 2 | 2,707 0 0 | 2 | 2,687 5 6 | .. | 19 10 6 |
| | Miscellaneous .. | 2,266 | 4,296 15 0 | 1,888 | 4,282 12 5 | 85 13 5 | .. |
| | | 7,767 | 44,726 5 6 | 7,651 | 42,853 0 9 | 2,039 0 2 | 3,912 2 11 |

## SUMMARY OF PROGRESS DURING THE YEARS 1914–15 TO 1918–19.

*Northern Circle.*

The following is a summary of the progress made in Forest Administration in the Circle during the quinquennium ending 1918–19.

2. The important event during the period under review was the great European war which commenced early in 1914–15 and prolonged almost throughout the period. The Forest Department was a useful resource and contributed to the war by supplying timber, tanning materials, wax, etc., required for war purposes, involving a sacrifice of revenue to a great extent. The war checked progress in many directions. Strict economy was observed and few works of importance were undertaken. Further, the deputation of officers to Military service restricted attempts at general developments.

3. *Administration and control.*—The forest work was controlled by the Board of Revenue until a month before the close of the quinquennium when the administration of the department was transferred to the Chief Conservator of Forests which post was created recently for the Presidency. Another important change in the administration was introduced in 1916 when the relative position of the Collector and District Forest Officer was modified. The District Forest Officer was placed in a position to express his own opinion on forest matters and the Conservator was made responsible, and given control over, all technical, financial and departmental matters in his circle.

The Conservators in charge of the circle were—

Mr. A. W. Lushington, C.I.E., up to 21st September 1915.
Mr. F. L. C. Cowley-Brown up to 4th November 1916.
Mr. H. A. Latham up to 31st December 1918.
Mr. S. Cox up to 31st May 1919.
Mr. C. M. Hodgson up to 30th June 1919.

4. *Forest administration.*—The classification of reserved forests according as they require technical control or admit of management by local panchayats, with reference to the recommendations of the Forest Committee, was completed. Some of the useless and unimportant reserved forests were disafforested.

Panchayats were sanctioned during the period for the management of 35 square miles in *Kistna* and the *Kurnools*. The management in respect of 9 square miles in *Kurnool South* and *West* was not actually handed over, panchayats for 3 square miles in Kistna were dissolved for continued unsatisfactory work and the working of the remaining 23 square miles was satisfactory.

5. *Changes in the controlling and executive charges.*—There were no changes, except the readjustment of the boundaries of some of the ranges in *Kurnool East* and *West.*

The sanction for the trifurcation of *Gōdāvari* could not be brought into effect owing to paucity of controlling officers. The proposal to form a fourth division in *Kurnool* matured and is awaiting sanction.

6. *Forest legislation.*—Nil.

7. *Organization—Strength of the staff.*—The sanction of the Secretary of State for India, was received towards the close of the quinquennium for the reorganization of the *executive* and *protective* staffs, the inadequacy of which was long felt. The scales of pay were raised and the strength was increased; but the latter, especially that of the protective staff needs further augmentation.

The prospects of the *clerical* service of the department are not satisfactory. Efficiency is lacking and work is deteriorating. The reorganization of the staff with improved prospects is urgently needed.

8. *Hill tribes.*—The *Khonds* of *Ganjām* with a few exceptions have considerably improved and most of the forest works including general and fire protections are carried out by them. They have developed their skill especially in felling timber and fuel. The concession of free removal of forest products was, as usual, enjoyed by them generally without abuses. *Koyas* and *Reddis* in the *Gōdāvaris* were mostly

employed in fire protection operations and were granted rewards in addition to wages; they do the work willingly. *Chenchus of Kurnool.*—The post of a "Special Officer" for the reformation of the *Chenchus* was created in 1916, and the first officer appointed to it was Mr. Saunders, Assistant Superintendent of Police, who took charge in December 1916, and continued to the end of the period under review. His duties are to gain the confidence of the *Chenchus*, to employ them suitably and prevent crime. The *Chenchus* are employed by the Forest Department in felling bamboos and preparing splits, in collecting minor produce, and on fire protection, and their conversion from criminals to useful people is a difficult matter which will take years to accomplish.

*Central Circle.*

9. *Administration.*—The control of the department in the general administration was transferred to the charge of the Chief Conservator of Forests with effect from 1st June 1919.

10. The following officers were in charge of the Central Circle during the quinquennium ending with the year 1918–19 :—

| Year. | Name of officer. | Period during which he was in charge. |
|---|---|---|
| 1914–15 | Mr. H. B. Bryant | 1st July 1914 to 25th January 1915. |
| | „ S. Cox | 26th January 1915 to 30th June 1915. |
| 1915–16 | „ S. Cox | 1st July 1915 to 17th December 1915. |
| | „ H. B. Bryant | 18th December 1915 to 30th June 1916. |
| 1916–17 | „ H. B. Bryant | 1st July 1916 to 30th June 1917. |
| 1917–18 | „ H. B. Bryant | 1st July 1917 to 2nd April 1918. |
| | „ H. F. A. Wood | 3rd April 1918 to 17th June 1918. |
| | „ H. B. Bryant | 18th June 1918 to 30th June 1918. |
| 1918–19 | „ H. B. Bryant | 1st July 1918 to 2nd January 1919. |
| | „ H. F. A. Wood | 3rd January 1919 to 17th June 1919. |
| | „ A. B. Jackson | 18th June 1919 to 30th June 1919. |

11. In accordance with the G.O. No. 3020, Revenue, dated 13th October 1913, passing orders on the Forest Committee's report, on questions of grazing, provision of fuel and small timber and leaf manure, the forests were classified under six heads and the control over 116 reserved forests out of 234 placed in class V was transferred to panchayats.

12. During the year 1915–16 the system of administration in the Presidency underwent a great change consequent on the issue of G.O. No. 260, Revenue, dated 7th February 1916. The Government have placed the District Forest Officer in a more independent position than he has hitherto occupied. The object of the Government Order was while retaining the general power and authority of the Collector as head of the district for the welfare of the community in general to leave in the hands of the District Forest Officer and Conservator all purely sylvicultural and departmental matters. From the point of view of the forest administration the change has been for the better.

13. During the year 1917–18, proposals for the formation of a fifth circle were submitted to the Board by the Conservators, but no final orders have been received. In his letter No. 54, Revenue, dated India Office, London, the 3rd August 1917, the Secretary of State sanctioned an increase in the controlling staff of the Forest Department of this Presidency by the addition to the cadre of 10 Imperial officers including the Chief Conservator and of 10 Provincial officers. The appointment of the Chief Conservator was given effect to from 1st June 1919 but it has not yet been possible to make any addition to the number of Imperial officers.

14. *Changes in the controlling and Range charges.*—In 1914-15 there was an addition to the number of ranges in East Cuddapah and two of the existing ranges in Guntūr and Chittoor were amalgamated. In 1915-16, two of the ranges in the Nellore district were amalgamated; portions of the Gorivikanama and Dorigallu reserves of Cuddapah district and of Eswaramala reserve of Chittoor district were transferred to Kadiri Range of Anantapur district. Sanction for the division of the old Tirupati range and a portion of Madanapalli range into two ranges, viz., Mamandur and Chamala was accorded during the year 1915-16 but was not given effect to till 1st October 1916. The division of Cuddapah into three forest charges was sanctioned in 1915-16, and was given effect to from 1st April 1917 (i.e., 1916-17) consequent on this, the old Vempalli range was divided into two ranges, viz., Vempalli and Muddanur and the old Kodur range into Kodur and Balapalli ranges. In Bellary district Hospet and Sandur ranges were amalgamated into one viz., the Hospet range in 1916-17. There was a re-adjustment of boundary between West and North Cuddapah divisions during 1917-18 and sanction was accorded by Government in their Order No. 938, Revenue, dated 6th March 1918, to class the former as a major charge and the latter a minor one. West Cuddapah was also further subdivided from 4 to 6 ranges under the sanction of Government in 1917-18 the two new ranges being named Vontimitta and Ganganapalli. In 1918-19 a third range, viz., Śrīperumbudūr was formed in Chingleput district with effect from 1st November 1918; consequent on the handing over of the Sandūr leased forests to the Sandūr Darbar on 1st July 1918 the amalgamation of Hospet range partly with Bellary and partly with Kudligi ranges was given effect to from 1st August 1919.

15. *Legislation.*—The Madras Forest Act V of 1882 was amended by the Madras Decentralization Act, 1914, giving powers to the Board of Revenue to grant pattas in reserves notified under sections 4 and 16; consequent on the appointment of the Chief Conservator for the Presidency of Madras, a Bill to amend the Madras Act V of 1882, as amended by the Madras Decentralization Act, 1914, was prepared. The Timber Transit Rules were extended to the whole of West Cuddapah and Chittoor districts during 1918-19, and as a result of same, there was more effective check over removals of timber than in previous years.

16. *Organization.*—G.O. No. 961, Revenue (Special), dated 14th May 1919, was issued giving all Imperial Forest officers now in service, to whom articles 476 and 641 of the Civil Service Regulations apply an unfettered option of retiring at any time after completing twenty years service unless they elect to come under the revised pension rules which may hereafter be issued in connexion with recommendations of the Public Services Commission, and augmentation of the time scale of pay for the Imperial Forest officers as recommended by the latter Commission was under consideration; the reorganization and increase of the executive and protective staff was sanctioned during 1918-19 and is to be given effect to from 1st October 1919.

*Southern Circle.*

17. The chief feature of the quinquennium was the outbreak of the war at the beginning of the period and its closure at the end of the period under review, this considerably retarded progress.

18. *Administration.*—The control of the department in the general administration continued under the Forest Commissioner until 1st June 1919 when it was transferred to the Chief Conservator which post was created in G.O. No. 3929, Revenue, dated 6th December 1917.

The headquarters of the Southern Circle were transferred from Trichinopoly to Salem in December 1918 and the following officers were in charge during the period under review:—

| | |
|---|---|
| Mr. J. S. Battie .. .. | 1st July 1914 to 1st November 1914. |
| „ P. M. Lushington .. | 2nd November 1914 to 9th October 1918. |
| „ H. F. A. Wood .. | 10th October 1918 to 30th December 1918. |
| „ H. A. Latham .. .. | 31st December 1918 to 16th May 1919. |
| „ A. B. Jackson .. .. | 17th May 1919 to 16th June 1919. |
| „ H. A. Latham ... .. | 17th June 1919 to 30th June 1919. |

A Forest Engineer (Mr. F. J. Marshall) was appointed in 1914, his headquarters are at Salem.

The position of the Collector and the District Forest Officer was considerably altered by the issue of G.O. No. 260, Revenue, dated 7th February 1916. As a result, a great deal of extra work has been thrown on the Conservators more especially in the matter of appeals.

North Arcot Revenue district was made three forest charges with effect from 1st April 1917 and the land revenue administration on the Javadis was transferred to the Forest Department and the District Forest Officer, West Vellore, was appointed a 'Deputy Collector'.

A fairly complete system of roads has been commenced for opening up the Javadis, the first road being opened in August 1918 by the late Hon'ble Mr. H. F. W. Gillman, I.C.S.

The forests on the banks of the Cauvery and the Coleroon which were under the control of the Forest Department in Trichinopoly, Tanjore and South Arcot districts were transferred to the Public Works Department. In Tanjore, owing to the remaining reserves being few and far apart, the control of them was transferred to the Collector from 1st December 1918.

Messrs. E. A. Davis, I.C.S., and A. W. Lushington, C.I.E., I.F.S. (retired) were appointed on special duty, the former for formation of panchayats and the latter for timber investigation.

The circle now consists of the following divisions:—

1. North Vellore.
2. South Vellore.
3. West Vellore.
4. South Arcot.
5. North Salem.
6. South Salem.
7. Trichinopoly.
8. Madura.
9. Tinnevelly-cum-Ramnad.

19. *Organization.*—At the end of the quinquennium, the re-organisation scheme for the executive and protective staff, the need for which had been felt for several years, was sanctioned and is to be given effect to in the course of the year 1919. As a result of the inquiry held by the Public Service Commission the pay and allowances of Imperial officers of the department have been improved. Orders about the Provincial service are still awaited.

*Western Circle.*

20. *Administrative control.*—Mr. C. D. McCarthy held charge of the circle for the whole period except from 12th April 1916 to 27th October 1916, when Mr. H. A. Latham was in charge, and from 12th May 1919, when Mr. H. Tireman assumed charge.

21. *Changes in the controlling charges.*—The division of *South Kanara district* into two forest districts designated *Mangalore North* and *Mangalore South* was brought into effect from 16th May 1916.

22. *General.*—During the period under review 19 panchayats were formed and managed 16 reserved forests covering an area of 10,411·52 acres. With one exception the panchayats are unfavourably reported on.

Mr. G. S. Hart, C.I.E., Inspector-General of Forests, visited the *Nilgiris* and *South Malabar* in 1918–19 inspecting the Nilgiri Eucalyptus plantations, the Mudumalai forests and the Nilambur Teak plantations.

*Northern Circle.*

23. *Changes in area.*—The area under the control of the department decreased from 5,123 to 5,112 square miles. The decrease was chiefly due to disafforestations of reserved forests and to excisions from reserved lands—

| | At commencement of the period. | At close of the period. |
|---|---|---|
| | SQ. MLS. | SQ. MLS. |
| Reserved forests | 4,614 | 4,621 |
| Reserved lands | 507 | 489 |
| Leased forests | 2 | 2 |
| Total | 5,123 | 5,112 |

In addition to the above, 436 square miles of unreserved lands in *Gōdāvari Upper* and *Kistna* which are not shown in the returns were under the control of the department.

24. *Further reservation.*—A scheme for the reservation of areas in the Rampa forests of the *Gōdāvari* Agency was formulated during 1914 and 21 blocks with an area of about 300 square miles were proposed to be reserved. Substantial progress could not be made in their reservation for want of proper maps. The areas had to be surveyed and mapped before preparing the initial notifications for publication Surveyors from the Madras Survey Department who were deputed to survey the areas during 1915–16 surveyed ten blocks and mapped four of them; the survey records of the remaining six were found faulty and needed rectification. The initial notifications in respect of four blocks mapped (12 square miles) were published during 1918–19. The question of employing a special staff to push on the work is under correspondence.

In *Ganjām*, it is proposed to convert some of the unreserved lands containing valuable sāl growth into reserved forests and such areas are being selected for reservation.

25. *Changes in area—* *Central Circle.*

| | At commencement of the period | At close of the period. |
|---|---|---|
| | SQ. MLS. | SQ. MLS. |
| Reserved forests .. .. .. .. .. | 5,788 | 5,714 |
| Do. lands .. .. .. .. .. | 73 | 20 |
| Total .. | 5,861 | 5,734 |

*Reserved forests.*—Twelve square miles were transferred from reserved lands but 74 square miles were disafforested, 3 square miles handed over to Putlampalli shrotriemdar and 9 square miles deducted on account of correct computation and resurvey. This resulted in a net reduction of 74 square miles of reserved forests.

*Reserved lands.*—Twenty-four square miles were notified under section 4 but 12 square miles were transferred to reserved forest; 62 square miles of Sandur leased forest handed back to the Darbar, two square miles excluded on account of wrong inclusion originally in Errakonda extension II, Anantapur district, and one square mile (727 acres) of Sriharikota, Nellore district, was notified and cancelled, thus resulting in a net deduction of 53 square miles of reserved lands.

26. *Changes in area.*—The area under the control of the department fell from 4,430 square miles to 4308 of which areas "reserved forests" constituted 4,359 and 4,243 square miles respectively the balances being reserved lands. *Southern Circle.*

The decrease was due chiefly to the disafforestation of areas unsuitable for retention as forests.

27. The area under the control of the Forest Department has decreased from 4,251 to 4,238 square miles, the difference being chiefly due to disforestation. The areas at the commencement and close of the quinquennial period were as shown below:— *Western Circle.*

| | At the commencement of the period. | At the close of the period. |
|---|---|---|
| | SQ. MLS. | SQ. MLS. |
| Reserved forests .. .. .. .. | 4,071 | 4,103 |
| Reserved lands .. .. .. .. | 53 | 8 |
| Leased forests .. .. .. .. | 31 | 31 |
| Leased lands .. .. .. .. | 96 | 96 |
| Total .. | 4,251 | 4,238 |

28. *Forest Settlement.*—The balance under settlement at the end of the quinquennium was 489 square miles; of which, 418 square miles have actually been settled and the final notifications in respect of which will be published during 1919–20. *Northern Circle.*

*Central Circle.* 29. The works of forest settlement was practically complete in the circle except in the case of small extensions and additions to the existing reserved forests. Owing, however, to corrections of area, disafforestation, etc., the area finally settled at the close of the year 1918–19 amounted to 5,714 square miles as compared with 5,788 square miles at the end of 1913–14.

*Southern Circle.* 30. Ten and a quarter square miles were settled during the period and reservation is now practically complete except in *North* and *South Salem* districts.

*Western Circle.* 31. *Forest Settlement.*—The area finally settled at the end of the period was 4,134 against 4,102 square miles at its commencement. The balance under settlement at the close of the quinquennium was 2·69 square miles, of which the actual settlement of 2·55 square miles was completed, but notifications under section 16 had not been published at the close of the period.

*Northern Circle.* 32. *Demarcation.*—The total length of the artificially marked boundaries at the end of 1918–19 was 5,758 miles while that at the commencement of the quinquennium was 5,882 miles. The decrease was due to disafforestations and rectification of errors.

*Central Circle.* 33. The total length of boundaries artificially demarcated at the close of 1913–1914 was 11,770 miles as compared with 11,442 miles nearly at the close of the quinquennium. The decrease is due to disforestation of reserves and plantations. The instructions issued by the Conservator in his Circular No. 17 of 1913, dated 3rd May 1913, to the effect that nearly every reserve which is to be retained under the management of the department should be demarcated on the lines indicated in the circular have been attended to and satisfactory progress has been made in re-demarcating the reserves the original demarcation of which was found to be perfunctory.

*Southern Circle.* 34. The total length of artificially marked boundaries at close of 1918–19 was 8,590 miles. During the period under review 260 miles of boundaries were permanently demarcated mostly in *Madura.*

*Western Circle.* 35. The total length of artificially marked boundaries at the close of 1918–19 amounted to 6,785 miles as compared with 8,056 miles at the commencement of the quinquennium, the decrease being due to disafforestation of reserves in The *Nilgiris* and re-calculation after more accurate survey in *North* and *South Mangalore.* Three hundred and seventy-nine miles remained to be demarcated on 30th June 1919.

A special staff was appointed in The *Nilgiris* in April 1915 for the demarcation of the new boundary between The Nilgiris and Coimbatore and also for the verification of the boundaries of the reserved forests in the former division. Fourteen and half miles of the district boundary were demarcated and the boundaries of 49 reserved forests verified and those of 39 demarcated. The special staff was disbanded in 1918–19.

*Northern Circle.* 36. *Forest surveys.*—There were no operations by the Survey of India during the quinquennium. Local surveys of forests, coupes, alignment of roads, etc., were carried out wherever necessary.

*Central Circle.* 37. 269·799 square miles on the 2-inch scale and 159·385 square miles on the 4-inch scale were surveyed by the Survey of India Party during the five years; the Index map of the Madras Presidency was published during 1914–15. Departmental surveys call for no remarks.

*Southern Circle.* 38. The survey of the reserved forests of the circle on the scale of 2 inches= 1 mile was taken up by the Survey of India Party during 1914–15 in *South Vellore* and an aggregate area of 66 miles was topographically surveyed. Departmental surveys call for no remarks.

*Western Circle.* 39. A special surveyor deputed by the Survey of India completed the final survey of seventeen teak plantations covering 6,458 acres in *South Malabar* and prepared maps for them on the 8-inch scale. A surveyor deputed by the Madras Survey Department completed the survey of estates on the Anamalais in *South Coimbatore* and Irula settlements in *The Nilgiris.*

*Northern Circle.* 40. *Working plans.*—The areas brought under working plans at the beginning of 1914–15 were 2,033 square miles which included erroneously 59 square miles. Regular working plans for 92 square miles and preliminary working plans and

tentative working schemes for 689 square miles were compiled and sanctioned. Plans for 14 square miles were cancelled and those for 20 square miles revised. A regular working-plan for the plains sāl forests in *Ganjām* covered by a tentative working scheme was prepared and another for hill forests is under preparation. The areas under working plans at the close of the quinquennium, excluding those disafforested, were 2,738 square miles; of which, 864 square miles have regular working plans and the balance preliminary plans and tentative working schemes.

*Central Circle.*

41. Up to the end of the year 1913-14, working plans were compiled for 1,792 square miles; during the quinquennium working plans were compiled for 488 square miles; but working plans for 1,369 square miles were cancelled on account of the impossibility of carrying out the provisions, disafforestation of areas and the cessation of the period covered by working plans. There were only 911 square miles covered by working plans at the close of the quinquennium.

Working plans are urgently required in place of those cancelled but until a special working plans branch is sanctioned, no satisfactory progress in the preparation of working plans is possible with the present hopelessly inadequate staff.

*Southern Circle.*

42. During the quinquennium working-plans were compiled and submitted for 369 square miles. An aggregate area of 501 square miles has been taken up for the preparation of working plans. The area for which working plans have still to be taken in hand is 541 square miles.

*Western Circle.*

43. During the quinquennium, working plans were sanctioned for 58 square miles; and the areas for which working plans were compiled but not sanctioned at the close of the period were 127 square miles. The total area under sanctioned working plans at the close of the quinquennium was 1,854 square miles against 1,614 square miles at the commencement. The difference is due to the adoption of correct figures furnished by District Forest officers. Working plans have still to be prepared for an area of 1,214 square miles, and are not required at present for an area of 997 square miles, as there is no possibility of working the forests concerned for some years. A special working-plan staff entertained at the close of the year 1915–16 worked in the Circle till the end of the quinquennium.

*Northern Circle.*

44. *Communications and buildings.*—The average annual expenditure on communications, buildings and other works during the quinquennium under review was Rs. 59,763 against Rs. 92,371 during the preceding five years. The decrease was due to a large outlay on the construction of roads and buildings during the past quinquennium and to the observance of economy on account of war during the period under review.

*Central Circle.*

45. The average annual expenditure on communications, buildings and other works amounted to Rs. 42,149 during the period against Rs. 65,175 during the previous five years. The decrease in expenditure was due to the postponement of works on account of financial stress.

*Southern Circle.*

46. The average annual expenditure on communications and buildings and other works amounted to Rs. 98,445 during the period under review as compared with Rs. 83,538 of the previous quinquennium; the increase was due to the construction of expensive roads on the Javadis: the general opening up of forests for exploitation, and the construction and maintenance of rest-houses and quarters was continued but not as fast as would have been the case but for the war.

*Western Circle.*

47. The average annual expenditure on communications, buildings and other works during the quinquennium period ending 30th June 1914 was Rs. 89,524; whilst that during the five years under review was Rs. 80,894; the decrease was chiefly due to the war.

*Northern Circle.*

48. *Forest offences*—The average annual number during the previous quinquennium was 3,496, whilst for the period under review it rose to 3,737. *Injury by fire, unauthorized felling* and *other offences* increased by 89, 11 and 16 per cents respectively, while *unauthorized grazing* decreased by 20 per cent. The increase under *injury by fire* was due to the cases of incendiarism having been treated as undetected offences; the offences in unreserved lands were brought to returns more accurately during the period and this accounts for the increase under the other two heads. The decrease under *unauthorized grazing* was due to better protection.

*Central Circle.* 49. The average annual number of forest offences under the quinquennium under review was 9,539 against 8,656 during the previous five years.

*Southern Circle.* 50. The average annual number of forest offences reported during the quinquennium was 12,305 as compared with 12,553 of previous quinquennium. The principal decreases were in the *Trichinopoly* and *South Arcot* districts and there were considerable increases in *Madura*, *South Salem* and *North Salem*. It is feared that the decreases are not due to want of offences in *Trichinopoly* where the present District Forest Officer is having a busy time. In *South Arcot* several reserves which contributed to swell the total have been disafforested.

*Western Circle.* 51. The average annual number of forest offences during the quinquennium under review was 3,374 as compared with 3,404 during the five years ending with 1913–14.

*Northern Circle.* 52. *Fire protection.*—The average annual area under systematic protection during the preceding quinquennium amounted to 1,523 square miles, the average of failures being 20 per cent; the area was increased during the period under review to an average of 2,273 square miles, the failures amounting to 16 per cent. A large area which was under general protection during the previous quinquennium was brought under rigid protection.

*Central Circle.* 53. The average area under special fire protection amounted to 2,179 square miles, the average failure being 12·9 per cent. In the previous period the average area under protection was 1,716 square miles, while failures amounted to 9·2 per cent. The increase in the area as compared with the previous five years ending 1913–14 was due to additional areas brought under protection in all the districts except Anantapur, Guntūr and Chingleput.

*Southern Circle.* 54. During the period under review the average area under systematic fire protection amounted to 1,301 square miles, the average failure being 3·9 per cent, while in the previous period the average area under systematic protection was 1,046 square miles and the failure being 1·6 per cent. The increase in the areas brought under protection was in *West Vellore*, *South Salem* and *Madura*.

*Western Circle.* 55. During the period under review the average annual area under systematic protection amounted to 1,080 square miles, the average of failure being 4 per cent, whereas the average area during the five years ending with 1913–14 was 1,063 square miles with an average failure of 5·5 per cent.

*Northern Circle.* 56. *Protection from cattle.*—Reserved forests were entirely closed to goats with the exception of a few under the rights admitted at Forest Settlement. During the quinquennium under review the average area annually open to all animals other than goats was 3,725 square miles or 73 per cent of the total average forest area. The average number of animals permitted to graze on payment decreased from 610,907 to 554,648 in the period under review. The incidence of grazing exceeds the possibility in several reserves.

*Central Circle.* 57. With the close of the year 1915–16, goats were prohibited from entering all reserves except in portions of Kayar, Kolathur and Mambakkam, Chingleput district, used as artillery practice ground and in 1916–17 only 412 goats were allowed to graze in Chingleput district; subsequently goats were excluded from all reserved forests. The average area annually open to cattle other than goats decreased by 486 square miles, the average area open to grazing being 4,642 square miles. During the same period the average forest area amounted to 5,798 square miles or 135 square miles (2·3 per cent) less than during the previous quinquennium. The average number of all animals admitted to graze decreased from 1,586,837 in the previous quinquennium to 1,094,921 in the period under review.

The regulation of grazing in forest areas was attended to and satisfactory progress was made in *North* and *South Cuddapah* where the incidence of grazing is 6·7 acres and 7·5 acres per cow unit respectively. In *West Cuddapah* the incidence of grazing is 4·2 acres per cow unit and in order to reduce the grazing incidence, the grazing fees for Sugali cattle and for cattle coming from villages beyond 5 miles from the reserve have been enhanced from 3 annas to Re. 1. In *Nellore*, limitation of grazing was introduced under kancha system, under which all reserves except Sriharikota and the casuarina plantations are worked. In *Chingleput* district the

kancha system was introduced during 1917–18 and it is reported to be working satisfactorily. A grazing scheme for *Guntūr* district was sanctioned during 1915–16 where the grazing incidence is 4·02 acres per cow unit. The grazing incidence was reduced in *Anantapur* district in 1918–19 on account of enhancement of grazing fees and each cow unit got 4·06 acres against 2·01 acres in the previous year. In Bellary the question of general enhancement of fees was dropped by the Board in Board's Proceedings Forest Mis. No. 185, dated 16th May 1918, on the ground that the district is too backward to admit of any change; the question of introducing the forest village system is under consideration. In *Chittoor*, the incidence of grazing is still heavy and a new grazing scheme will shortly be prepared.

*Southern Circle.*

58. During the period under review the average area closed to all animals increased by 9 per cent and that open to all cattle except goats fell by 10 per cent. The average area open to grazing was 3,502 square miles against 3,871 square miles of the previous quinquennium. The decrease was due to the closure of several reserves to grazing on account of incendiarism, etc.

The average number of animals admitted to graze was 852,168 against 1,204,285 of the previous period. The average incidence now works out to one animal for every 2·63 acres which is very heavy for the class of grazing available. The decrease is in part due to enhancement of the grazing fees.

During the period under review *goat-browsing was entirely forbidden*; reserves were handed over to panchayats; and the forest village system was introduced in some districts.

*Western Circle.*

59. The whole forest area is closed to goats. The average area annually open to all animals other than goats was 3,316 square miles and the area open to all animals except sheep and goats, 298 square miles, or 78 per cent and 7 per cent respectively of the total area. The average number of animals permitted to graze on payment increased from 360,757 in the previous quinquennium to 381,493 in the period under review. The Forest village system was sanctioned for one range of *South Coimbatore* and one range and one reserve in Central Coimbatore division.

*Northern Circle.*

60. *Yield and outturn.*—The following are comparative average annual outturns of major and minor produce for the two periods :—

| | Timber and fuel in thousands of cubic feet. | Number of bamboos in lakhs. | Minor produce including grass and grazing value in lakhs. |
|---|---|---|---|
| 1909–10 to 1913–14 .. .. .. .. | 6,538 | 161·1 | 37·2 |
| 1914–15 to 1918–19 .. .. .. .. | 6,120 | 161·6 | 35·8 |

The average annual outturn of timber and fuel and the average value of minor produce decreased by 6·3 and 3·7 per cents respectively while the outturn of bamboos increased by ·3 per cent.

*Central Circle.*

61. The following statement shows the average annual outturn of the forests for the two periods :—

| | Timber and fuel in thousands c.ft. | Bamboos in number. | Minor produce value. |
|---|---|---|---|
| | | RS. | RS. |
| 1909–10 to 1913–14 .. | 6,838 | 40,56,803 | 7,43,910 |
| 1914–15 to 1918–19 .. | 7,591 | 24,83,089 | 8,55,796 |

There was an increase of 9·9 per cent on the average annual outturn of timber and fuel and of 13·07 per cent in the average annual value of minor produce. There was a decrease of 63·4 per cent in the average number of bamboos extracted.

*Southern Circle.*

62. The following statement shows the average annual outturn for the two periods :—

| | Timber and fuel, c.ft. | Bamboos. | Minor produce. |
|---|---|---|---|
| | | RS. | RS. |
| 1909–10 to 1913–14 .. | 9,207,677 | 97,559 | 2,51,092 |
| 1914–15 to 1918–19 .. | 5,501,879 | 1,16,779 | 4,24,721 |

There was a decrease under timber and fuel and increases under bamboos and minor produce, the percentages being −40·2, +22·2 and +68·1 respectively.

No reasonable explanation of the figures under 'Timber and Fuel' is available. The difference may in part be due to the fact that under timber and fuel up to 1912–13 we were largely working departmentally and could get actual figures whereas, since, a conversion figure, based *usually* on the seigniorage, is adopted for converting rupees at auction into cubic feet in the timber accounts.

Under minor produce and bamboos the increase is due to general enhancement of prices especially for tanning stuffs.

*Western Circle.*

63. The sub-joined table shows the average annual outturn of the forests for the two periods :—

| | Timber and fuel in thousands of c. ft. | Bamboos value. | Minor produce including grass and grazing value. |
|---|---|---|---|
| | | RS. | RS. |
| 1909–10 to 1913–14 .. .. .. | 4,266 | 34,841 | 1,49,182 |
| 1914–15 to 1918–19 .. .. .. | 5,948 | 42,135 | 1,94,657 |
| Increase .. | 1,682 | 7,294 | 45,475 |
| Percentage of increase .. | 39·4 | 20·9 | 30·4 |

*Northern Circle.*

64. *Financial results.*—The average annual financial results for the last two periods were as follow :—

| | Revenue. | Expenditure. | Surplus. |
|---|---|---|---|
| | RS. | RS. | RS. |
| 1909–10 to 1913–14 .. .. .. | 7,78,696 | 8,63,147 | — 84,451 |
| 1914–15 to 1918–19 .. .. .. | 7,76,961 | 6,73,760 | + 1,03,201 |

The circle was working on an average annual deficit of Rs. 84,451 during the preceding quinquennium and this was due to greater outlay on non-remunerative works, such as the construction of roads and buildings and formation of plantations. The financial position of the circle was considerably improved during the period under review. There was a slight fall in the gross revenue, while the expenditure decreased by about 22 per cent. But the very high surplus will go down considerably during the next quinquennium when most of the deferred works will be taken up and improvements in other directions carried out.

*Central Circle.*

65. The average annual financial results for the last two periods were as follows :—

| Year. | Revenue. | Expenditure. | Surplus. |
|---|---|---|---|
| | RS. | RS. | RS. |
| Quinquennium ending 1913–14 | 11,82,412 | 7,98,212 | 3,84,200 |
| Do. 1918–19 | 12,42,004 | 6,37,165 | 6,04,839 |

The gross revenue increased by 4·8 per cent, the expenditure decreased by 25·3 per cent and the surplus increased by 36·5 per cent. The decrease was due to financial stringency on account of war.

*Southern Circle.*

66. The average annual financial results for the two periods were as follows :—

| Year. | Revenue. | Expenditure. | Surplus. |
|---|---|---|---|
| | RS. | RS. | RS. |
| 1909–10 to 1913–14 .. .. | 13,76,456 | 7,31,875 | 6,44,581 |
| 1914–15 to 1918–19 .. .. | 13,61,539 | 6,60,056 | 7,01,483 |

The increase is due for the most part to the large rise in the price of sandalwood.

In some districts there has been a fall in the annual net surplus during the quinquennium, in Madura amounting to Rs. 55,000, due generally to the stoppage of goat browsing in, and the removal of manure leaves from, reserved forests—in Madura the cessation of the sale of tank-bed coupes has been an additional factor.

*Western Circle.*

67. *Financial results.*—The average annual financial results for the last two periods were as shown below :—

| | Revenue. | Expenditure. | Excess or deficit. |
|---|---|---|---|
| | RS. | RS. | RS. |
| 1909–10 to 1913–14 .. .. | 7,77,773 | 7,96,164 | — 18,391 (deficit) |
| 1914–15 to 1918–19 .. .. | 12,32,509 | 9,03,189 | + 29,320 (surplus) |

The average gross revenue for the period under review increased by 58·6 per cent and the expenditure by 13·4 per cent. During the year 1914–15, the circle worked at a loss, but in the succeeding four years the financial position was very much improved and the average annual net surplus for the period under review was 26·7 per cent.

68. *Forest education.*—Twenty-nine subordinates were deputed during the quinquennium under review for training in the Provincial College at Coimbatore; of these five were sent back being incapable of following the course, eleven secured higher and eight lower standard certificates, one failed and four were undergoing training. *Northern Circle.*

The training of the *protective* staff (foresters and guards) was carried out in the Vernacular Training school having six months' course in a year, sanctioned separately for the circle. Two sessions of the school were located in *Kurnool South* and two in *Ganjām*. The 1917 session was not held for want of suitable candidates. The school has done excellent work and a number of lower subordinates have been usefully trained.

69. *Forest education.*—During the period under review two rangers and 26 deputy rangers were deputed to the Madras Forest College; three of the Deputy rangers were sent back from the college for incapacity to follow the course, three failed and one died at the college. Of the 17 candidates that successfully underwent training, two obtained Honour's Certificates, 13 higher and two lower standard certificates. *Central Circle.*

70. *Vernacular training school.*—The school was held twice in West Cuddapah and once in each of the districts, Nellore, Chittoor and Chingleput. One hundred and thirty-nine candidates on the whole were trained in the school during the period under review.

71. *Forest education.*—During the period under review, the Madras Forest College was transferred to the new building at Lawley Road, Coimbatore. The following table shows the results during the quinquennium for the students sent up from this circle. *Southern Circle.*

| Period of sessions. | Total number trained. | Award of certificates. | | | | Withdrawn. |
|---|---|---|---|---|---|---|
| | | With honours. | Higher standard. | Lower standard. | Failure. | |
| Period ending June 1915 . | 4 | 1 | 2 | .. | .. | 1 |
| ,, ,, 1916 .. | 5 | .. | 5 | .. | .. | .. |
| ,, ,, 1917 .. | 5 | .. | 4 | .. | .. | 1 |
| ,, ,, 1918 .. | 6 | .. | 4 | 1 | .. | 1 |
| ,, ,, 1919 .. | 7 | 1 | 4 | 2 | .. | .. |

The Vernacular Training School for training foresters and forest guards was opened annually as usual. The results are summarised below :—

| Period. | Total trained. | Award of certificates. | | | Attendance. |
|---|---|---|---|---|---|
| | | First Class. | Second Class. | Third Class. | |
| February to July 1915 .. .. | 27 | 12 | 10 | 5 | .. |
| ,, ,, 1916 .. .. | 20 | 5 | 7 | 6 | 2 |
| ,, ,, 1917 .. .. | 28 | 5 | 23 | .. | .. |
| ,, ,, 1918 .. .. | 22 | 9 | 11 | .. | 2 |
| ,, ,, 1919 .. .. | 30 | 16 | 14 | .. | .. |

72. *Forest education.*—Twenty-one students returned from the Madras Forest College during the five years, three obtaining honours, seventeen higher standard certificates and one lower standard certificate. *Western Circle.*

A Vernacular Training school for the training of foresters and guards was held every year in various districts. The results are said to be satisfactory.

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# APPENDICES.

## APPENDIX A.—Comparative statement of number and origin of fires that occurred during 1918-19.

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire-traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | | | By intentional firing | | | | | | | | | |
| | | | | | By workmen employed in the forests, by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or by fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | Total. | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Northern Circle.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Ganjam .. .. | 4 | 67 | 5 | 265 | 3 | 147 | 22 | 8,339 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 25 | 8,486 | 10 | 2,400 | 44 | (a) 11,218 |
| Vizagapatam .. | 3 | 68 | 3 | 2,160 | 2 | 2 | 21 | 3,278 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 23 | 3,280 | .. | .. | 29 | 5,508 |
| Godavari, Upper. | .. | .. | 27 | 78,614 | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 153 | 9 | 13,457 | .. | .. | 11 | 13,610 | 11 | 9,721 | 49 | 101,945 |
| Do. Lower. | .. | .. | 1 | 90 | 4 | 270 | 24 | 1,793 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 28 | 2,063 | 25 | 2,772 | 54 | 4,925 |
| Kistna .. .. | 1 | 5 | 1 | 600 | 2 | 765 | 1 | 56 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 821 | 4 | 2,215 | 9 | 3,641 |
| Kurnool, East .. | 1 | 2 | 4 | 8,380 | 1 | 240 | 1 | 200 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 160 | 3 | 600 | 25 | 6,587 | 33 | 15,569 |
| Do. South .. | .. | .. | 7 | 34,993 | 10 | 4,435 | 5 | 10,907 | 2 | 20 | .. | .. | 9 | 8,114 | .. | .. | 19 | 18,062 | 45 | 41,538 | 10 | 10,285 | 62 | 86,816 |
| Do. West .. | 2 | 1,460 | 2 | 90 | 7 | 20,823 | 6 | 2,116 | 1 | 50 | .. | .. | 1 | 50 | 24 | 12,287 | 8 | 1,990 | 47 | 37,316 | 18 | 62,581 | 69 | 101,447 |
| Total .. | 11 | 1,602 | 50 | 1,25,192 | 29 | 26,682 | 80 | 26,689 | 3 | 70 | .. | .. | 12 | 8,317 | 33 | 25,744 | 28 | 20,212 | 185 | 107,714 | 103 | 96,561 | 349 | 331,069 |
| *Central Circle.* | | | | | | | | | | | | | | | | | | | | | | | | |
| Bellary .. .. | 1 | 65 | 5 | 2,604 | 1 | 5 | 24 | 4,195 | 5 | 585 | .. | .. | 3 | 1,130 | .. | .. | .. | .. | 33 | 5,915 | 10 | 2,383 | 49 | (a) 10,967 |
| Anantapur .. | .. | .. | 3 | 290 | .. | .. | 3 | 1,606 | 3 | 420 | .. | .. | 13 | 3,005 | 1 | 1 | 3 | 991 | 23 | 6,023 | 11 | 779 | 37 | 7,092 |
| Guntur .. .. | .. | .. | .. | .. | .. | .. | 10 | 113 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10 | 113 | .. | .. | 10 | (a) 113 |
| North Cuddapah. | 7 | 2,259 | 10 | 3,682 | 2 | 172 | 3 | 136 | .. | .. | .. | .. | 54 | 14,804 | .. | .. | 2 | 3 | 61 | 15,115 | 29 | 3,671 | 107 | (a) 29,727 |
| South do. | .. | .. | 4 | 1,430 | .. | .. | 2 | 91 | .. | .. | .. | .. | 53 | 11,990 | .. | .. | 2 | 971 | 57 | 13,052 | 4 | 44 | 65 | (a) 14,526 |
| West do. | 1 | 200 | .. | .. | 3 | 440 | 3 | 1,350 | .. | .. | .. | .. | 44 | 6,991 | .. | .. | 11 | 7,521 | 61 | 16,302 | 14 | 1,901 | 76 | (a) 18,403 |
| Nellore .. .. | 2 | 534 | 1 | 125 | .. | .. | 3 | 58 | .. | .. | .. | .. | 3 | 362 | .. | .. | 1 | 71 | 7 | 491 | 1 | 19 | 12 | (a) 1,169 |
| Chingleput .. | .. | .. | 1 | 90 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 90 |
| Chittoor .. .. | 2 | 123 | 6 | 804 | 3 | 46 | 3 | 59 | 1 | 25 | .. | .. | 30 | 1,297 | .. | .. | 5 | 320 | 42 | 1,747 | 9 | 273 | 59 | 2,947 |
| Total .. | 14 | 3,181 | 30 | 9,025 | 9 | 663 | 51 | 7,608 | 9 | 1,030 | .. | .. | 200 | 39,579 | 1 | 1 | 24 | 9,577 | 294 | 58,758 | 78 | 14,070 | 416 | 85,034 |

(a) Includes areas burnt in unprotected forest tracts.

Includes areas in unprotected blocks ..

| | Acs. |
|---|---|
| Bellary .. .. | 8,005 |
| Guntur .. .. | 113 |
| South Cuddapah .. | 1,244 |
| West do. .. | 5,988 |
| Nellore .. .. | 26 |
| North Cuddapah .. | 905 |
| Total .. | 16,281 |

## Appendix A.—Comparative statement of number and origin of fires that occurred during 1918–19—*cont.*

| District. | A. Fires caused by accident or through carelessness in burning fire lines. | | B. Fires entering the forests by crossing exterior fire lines. | | C. Fires beginning inside the reserves or fire traced areas. | | | | | | | | | | | | | | Causes unknown. | | Total of A, B and C and causes unknown. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Owing to carelessness or accident. | | | | | | By intentional firing. | | | | | | Total. | | | | | |
| | | | | | By workmen engaged in the forests or by purchasers of forest produce and by hay cutters. | | By villagers, travellers, etc., passing through the forests. | | By railway engines. | | By lightning or fire balloons. | | In order to obtain new grass. | | In order to turn out game or to reduce cover. | | Maliciously fired. | | | | | | | |
| | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. | Number of fires. | Area burnt in acres. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) |
| *Southern Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Vellore, North .. | 1 | 8 | .. | .. | .. | .. | 1 | 8 | .. | .. | 1 | 15 | 1 | 5 | 1 | (a) .. | 10 | 833 | 14 | 861 | 27 | 2,229 | 42 | 3,096 |
| Do. South .. | .. | .. | .. | .. | 2 | 21 | 3 | 138 | .. | .. | .. | .. | 33 | 1,665 | .. | .. | 3 | 266 | 41 | 2,090 | 10 | 456 | (b)51 | 2,548 |
| Do. West .. | .. | .. | 4 | 2,067 | .. | .. | 23 | 2,102 | .. | .. | .. | .. | 1 | 2,575 | 9 | 383 | 1 | 12 | 34 | 5,072 | 6 | 1,698 | 44 | 8,837 |
| South Arcot .. | .. | .. | .. | .. | .. | .. | 2 | 3 | .. | .. | 1 | (a) .. | .. | .. | 1 | 5 | 1 | 30 | 5 | 38 | .. | .. | 5 | 38 |
| Salem, North .. | .. | .. | 2 | 142 | .. | .. | 6 | 52 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 52 | 23 | 2,387 | 31 | 2,581 |
| Do. South .. | .. | .. | .. | .. | 1 | 2 | 5 | 22 | .. | .. | .. | .. | 12 | 195 | 5 | 491 | .. | .. | 23 | 710 | 32 | 705 | 55 | 1,415 |
| Trichinopoly .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 19 | 444 | 19 | 444 |
| Madura .. .. | .. | 1 | 5 | 86 | .. | .. | 7 | 381 | .. | .. | .. | .. | 8 | 419 | .. | .. | 36 | 3,278 | 51 | 4,078 | 31 | 2,410 | 87 | 6,574 |
| Tinnevelly .. | .. | .. | 5 | 362 | 2 | 72 | 2 | 270 | .. | .. | 5 | 182 | 6 | 1,575 | 18 | 10,119 | 2 | 56 | 35 | 12,274 | 5 | 337 | 45 | 12,978 |
| Total .. | 1 | 8 | 16 | 2,657 | 5 | 95 | 49 | 2,976 | .. | .. | 7 | 197 | 61 | 6,434 | 34 | 10,998 | 53 | 4,475 | 209 | 25,175 | 153 | 10,666 | 379 | 38,506 |
| *Western Circle.* | | | | | | | | | | | | | | | | | | | | | | |
| Mangalore, North. | 8 | 19 | 21 | 588 | .. | .. | 25 | 279 | .. | .. | .. | .. | 3 | 68 | .. | .. | 7 | 152 | 35 | 499 | 13 | 210 | 77 | 1,316 |
| Do. South. | 3 | 225 | 22 | 681 | 1 | 1,000 | 40 | 553 | .. | .. | .. | .. | 2 | 56 | 7 | 595 | 18 | 369 | 68 | 2,573 | 20 | 860 | 113 | 4,339 |
| Malabar, North .. | 3 | 56 | 4 | 622 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 296 | 11 | 974 |
| Do. South*. | .. | .. | 2 | 6 | 2 | 50 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 160 | 3 | 210 | 3 | 1,380 | 8 | 1,596 |
| The Nilgiris* .. | 8 | 801 | 1 | 2 | .. | .. | 20 | 604 | .. | .. | .. | .. | 20 | 4,724 | .. | .. | .. | .. | 40 | 5,328 | 8 | 2,400 | 57 | 8,531 |
| Kollegal .. | 3 | 2,415 | .. | .. | 1 | 295 | 3 | 90 | .. | .. | .. | .. | 7 | 4,541 | 2 | 210 | 5 | 261 | 18 | 5,397 | 2 | 1,190 | 23 | 9,002 |
| Coimbatore, North. | 1 | 60 | 1 | 250 | .. | .. | 2 | 4,600 | .. | .. | .. | .. | 2 | 6,040 | .. | .. | .. | .. | 4 | 10 640 | 32 | 8,773 | 38 | 19,723 |
| Do. Central. | .. | . | 1 | 550 | 5 | 23 | 4 | 7 | 2 | 85 | .. | .. | 1 | 50 | 1 | 100 | 2 | 89 | 15 | 354 | 3 | 135 | 19 | 1,039 |
| Do. South. | 1 | 1 | 2 | 53 | 3 | 40 | 2 | 661 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5 | 701 | .. | .. | 8 | 755 |
| Total .. | 27 | 3,577 | 54 | 2,752 | 12 | 1,408 | 96 | 6,794 | 2 | 85 | .. | .. | 35 | 15,479 | 10 | 905 | 33 | 1,031 | 188 | 25,702 | 85 | 15,244 | 354 | 47,275 |
| Grand total for 1918–19. | 53 | 8,368 | 150 | 139,626 | 55 | 28,848 | 276 | 44,067 | 14 | 1,185 | 7 | 197 | 308 | 69,809 | 78 | 37,648 | 138 | 35,595 | 876 | 217,349 | 419 | 136,541 | 1,498 | 501,884 |
| Grand total for 1917–18. | 57 | 8,353 | 282 | 152,228 | 34 | 8,722 | 366 | 78,521 | 19 | 2,139 | 18 | 1,780 | 486 | 299,333 | 69 | 109,719 | 155 | 61,341 | 1,142 | 561,595 | 745 | 312,679 | 2,226 | 1,034,885 |

(a) Less than 1 acre.

(b) Excludes one fire which occurred in unreserves.

* Includes the number of fires not under special protection.

APPENDIX B.—Comparative statement of impounded cattle for 1918–19.

| District. | Number of cattle impounded. | | Average for three years ending 1918–19. |
|---|---|---|---|
| | 1917–18. | 1918–19. | |
| *Northern Circle.* | | | |
| Ganjam .. .. .. .. | 1,974 | 1,657 | 2,027 |
| Vizagapatam .. .. .. | 816 | 917 | 918 |
| Godavari, Upper .. .. .. | 276 | 630 | 505 |
| Do. Lower .. .. .. | 766 | 677 | 736 |
| Kistna .. .. .. .. | 4,141 | 3,819 | 4,167 |
| Kurnool, East .. .. .. | 3,797 | 5,592 | 6,247 |
| Do. South .. .. .. | 2,511 | 3,596 | 2,438 |
| Do. West .. .. .. | 2,456 | 3,257 | 5,341 |
| Total .. | 16,737 | 25,145 | 22,379 |
| *Central Circle.* | | | |
| Bellary .. .. .. .. | 4,971 | 8,543 | 7,293 |
| Anantapur .. .. .. .. | 12,294 | 11,958 | 11,652 |
| Guntur .. .. .. .. | 21,769 | 23,674 | 23,528 |
| Cuddapah, North .. .. .. | 2,831 | 1,576 | 2,203 |
| Do. South .. .. .. | 857 | 1,100 | 1,305 |
| Do. West .. .. .. | 3,901 | 8,124 | 6,413 |
| Nellore .. .. .. .. | 6,928 | 8,622 | 7,361 |
| Chingleput .. .. .. .. | 3,338 | 2,544 | 3,334 |
| Chittoor .. .. .. .. | 5,458 | 7,357 | 6,496 |
| Total .. | 62,287 | 73,498 | 69,585 |
| *Southern Circle.* | | | |
| Vellore North .. .. .. | 6,732 | 5,400 | 6,439 |
| Do. South .. .. .. | 3,451 | 5,477 | 4,200 |
| Do. West .. .. .. | 1,217 | 2,226 | 2,046 |
| South Arcot .. .. .. | 5,043 | 3,479 | 5,436 |
| Salem North .. .. .. | 2,505 | 2,911 | 2,695 |
| Do. South .. .. .. | 3,902 | 3,559 | 3,366 |
| Trichinopoly .. .. .. | 2,284 | 6,420 | 3,839 |
| Madura .. .. .. | 4,296 | 5,093 | 4,221 |
| Tinnevelly .. .. .. | 3,001 | 2,698 | 3,573 |
| Total .. | 32,431 | 37,258 | 34,715 |
| *Western Circle.* | | | |
| Mangalore, North .. .. .. | 499 | 313 | 451 |
| Do. South .. .. .. | 449 | 462 | 466 |
| Malabar, North .. .. .. | 62 | 98 | 65 |
| Do. South .. .. .. | 253 | 473 | 270 |
| The Nilgiris .. .. .. | 577 | 464 | 645 |
| Kollegal .. .. .. .. | 492 | 2,884 | 1,412 |
| Coimbatore, North .. .. .. | 3,131 | 4,695 | 3,611 |
| Do. Central .. .. .. | 1,158 | 1,756 | 1,361 |
| Do. South .. .. .. | 730 | 439 | 591 |
| Total .. | 7,351 | 11,484 | 8,872 |
| Grand total, Presidency .. | 118,806 | 147,385 | 135,551 |

## Annual Form No. 65.

*Forest Department, Madras Presidency.*

Area of reserved forests and reserved lands during 1918–19.

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1918. | | Added during the year. | Excluded during the year. | Area on 30th June 1919. | | Area on 1st July 1918. | | Added during the year. | Excluded during the year. | Area on 30th June 1919. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Northern Circle.* | | | | | | | | | | | | | |
| Ganjām .. .. .. | 398,873 | 623 | .. | (a) 31 | 398,842 | 623 | .. | .. | 1,460 | .. | 1,460 | 2 | 625 |
| Vizagapatam .. .. | 199,371 | 312 | .. | .. | 199,371 | 312 | 1,327 | (b) 2 | 6 | .. | 1,333 | (b) 2 | 314 |
| Godavari, Upper .. .. | 278,471 | 435 | .. | (c) 9 | 278,462 | 435 | 219,580 | 343 | 35,943 | .. | 255,523 | 399 | 834 |
| Do. Lower .. .. | 256,470 | 401 | .. | (a) 1,500 | 254,970 | 398 | 47,924 | 75 | 7,966 | (d) 10 | 55,880 | 87 | 485 |
| Kistna .. .. .. | 169,694 | 265 | .. | (a) 339<br>(c) 159 | 169,196 | 264 | 400 | (e) 1 | .. | (f) 19 | 381 | (e) 1 | 265 |
| Kurnool, East .. .. | 638,176 | 997 | .. | (a)17,392 | 620,784 | 970 | .. | .. | .. | .. | .. | .. | 970 |
| Do. South .. .. | 486,664 | 760 | .. | .. | 486,664 | 760 | .. | .. | .. | .. | .. | .. | 760 |
| Do. West .. .. | 553,596 | 865 | .. | (a) 3,811 | 549,785 | 859 | .. | .. | .. | .. | .. | .. | 859 |
| Total .. | 2,981,315 | 4,658 | .. | 23,241 | 2,958,074 | (g) 4,621 | 269,231 | 421 | 45,375 | 29 | 314,577 | 491 | 5,112 |
| *Central Circle.* | | | | | | | | | | | | | |
| Bellary .. .. .. | 387,052<br>(j)— 217 | (l) 604 | .. | 2,133 | 384,702 | 601 | 42,060 | 66 | .. | 40,000 | 2,060 | 3 | 604 |
| Anantapur .. .. .. | (h) 479,542 | 749 | .. | .. | 479,542 | 749 | .. | .. | .. | .. | .. | .. | 749 |
| Guntūr .. .. .. | 516,904 | 808 | .. | 1,295 | 515,609 | 806 | .. | .. | .. | .. | .. | .. | 806 |
| Cuddapah, North .. .. | 381,157 | 595 | .. | .. | 381,157 | 595 | 396 | 1 | .. | .. | 396 | 1 | 596 |
| Do. South .. .. | (h) 295,592 | 462 | .. | 108 | 295,484 | 462 | 133 | .. | .. | .. | 133 | .. | 462 |
| Do. West .. .. | (h) 477,920 | 747 | 19 | .. | 477,939 | 747 | 2,870 | 4 | 523 | 19 | 3,374 | 5 | 752 |
| Nellore .. .. .. | 459,921<br>(f) — 20<br>(k)— 307 | 718 | 1,167 | .. | 460,761 | 720 | 1,240 | 2 | 6,775 | 1,167 | 6,848 | 11 | 731 |
| Chingleput .. .. .. | 132,218 | 207 | .. | .. | 132,218 | 207 | 11 | .. | 26 | .. | 37 | .. | 207 |
| Chittoor .. .. .. | 531,705 | 831 | 35 | 2,190 | 529,550 | 827 | 35 | .. | (i) .. | 35 | (i) .. | .. | 827 |
| Total .. | 3,661,467 | (l) 5,721 | 1,221 | 5,726 | 3,656,962 | 5,714 | 46,745 | 73 | 7,324 | 41,221 | 12,848 | 20 | 5,754. |

(a) Disafforested.
(b) Leased forests.
(c) Rectification of area.
(d) Transferred to the Salt department.
(e) Notified under section 26 of the Forest Act.
(f) Alienated to the Roman Catholic Mission for industrial concern under G.O. No. 3090, Revenue, dated 13th August 1918.
(g) The total area in column 6 works to 4,622 square miles, the deficit of one square mile is due to the exclusion of fractions below half a square mile in the districts.
(h) Reduction of one acre with a view to make it tally with the district figure.
(i) Represents an area below half an acre.
(j) Wrongly included under the reserved forest in previous years.
(k) Deduction made on account of resurvey.
(l) Revised figure.

## Area of reserved forests and reserved lands during 1918-19—*cont.*

| District. | Area of reserved forests. | | | | | | Area of reserved lands. | | | | | | Total area of reserved forests and reserved lands in square miles. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Area on 1st July 1918. | | Added during the year. | Excluded or transferred to other heads. | Area on 30th June 1919. | | Area on 1st July 1918. | | Added during the year. | Excluded during the year. | Area on 30th June 1919. | | |
| | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | Acres. | Equivalent in square miles. | Acres. | Acres. | Acres. | Equivalent in square miles. | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
| *Southern Circle.* | | | | | | | | | | | | | |
| North Vellore .. .. | 294,977 | 461 | 258 | (*c*) 285 | 294,950 | 461 | 1,117 | 2 | .. | (*c*) 258<br>(*d*) 58 | 801 | 1 | 462 |
| South do. .. .. | 267,766 | 418 | 24 | .. | 267,790 | 419 | 24 | .. | 3 | 24 | 3 | .. | 419 |
| West do. .. .. | 209,953 | 328 | .. | .. | 209,953 | 328 | 224 | .. | .. | .. | 224 | .. | 528 |
| South Arcot cum Tanjore. | 208,168 | 325 | .. | (*c*) 28,266 | 179,902 | 281 | .. | .. | .. | .. | .. | .. | 281 |
| North Salem .. .. | 512,048 | 800 | .. | (*a*) 570 | 511,478 | 799 | 24,629 | 38 | .. | .. | 24,629 | 39 | 838 |
| South do. .. .. | 357,600 | 558 | .. | .. | 357,600 | 558 | 15,090 | 24 | .. | .. | 15,090 | 24 | 582 |
| Trichinopoly .. .. | 221,477 | 346 | 1,627 | (*b*) 25,163 | 197,941 | 309 | 1,691 | 2 | 12 | (*d*) 69<br>(*e*) 1,622 | 12 | .. | 309 |
| Madura .. .. .. | 422,350 | 660 | 2 | .. | 422,352 | 660 | 2 | .. | .. | (*e*) 2 | .. | .. | 660 |
| Tinnevelly .. .. | 274,340 | 429 | .. | (*c*) 168 | 274,172 | 428 | 1,050 | 2 | 435 | .. | 1,485 | 2 | 430 |
| Total .. | 2,768,679 | 4,325 | 1,911 | 54,452 | 2,716,138 | 4,243 | 43,827 | 68 | 450 | 2,033 | 42,244 | (*n*) 66 | 4,309 |
| *Western Circle.* | | | | | | | | | | | | | |
| Mangalore, North .. . | (*g*) 231,978 | 362 | .. | .. | 231,978 | 362 | .. | .. | 81 | .. | 81 | .. | 362 |
| Do. South .. .. | 278,800 | 436 | .. | .. | 278,800 | 436 | .. | .. | .. | .. | .. | .. | 436 |
| Malabar, North .. .. | 168,076 | 263 | 348 | .. | 168,424 | 263 | 418 | 1 | .. | (*h*) 348<br>(*j*) 48 | 22 | .. | 263 |
| Do. South .. .. | 92,105 | 144 | 126 | .. | 92,231 | 144 | 12,980 | 20 | .. | (*h*) 126 | 12,854 | 20 | 164 |
| The Nilgiris .. .. | 297,437 | 465 | 24 | (*l*) 51 | 297,410 | 465 | 51,121<br>(*i*) 2,851 | 80<br>4 | .. | (*h*) 24 | 51,097<br>2,851 | 80<br>4 | 549 |
| Kollegal .. .. .. | 467,703 | 731 | .. | .. | 467,703 | 731 | .. | .. | .. | .. | .. | .. | 731 |
| Coimbatore, North .. | 586,172 | 916 | 540 | .. | 586,712 | 917 | 659<br>(*k*) 8 | 1 | .. | (*h*) 540 | 127 | 1 | 918 |
| Do. Central .. | 231,768 | 362 | .. | .. | 231,768 | 362 | .. | .. | 11 | .. | 11 | .. | 362 |
| Do. South .. | 290,560 | 454 | .. | (*m*) 172 | 290,388 | 454 | .. | .. | .. | .. | .. | .. | 454 |
| Total .. | 2,644,599 | 4,133 | 1,038 | 223 | 2,645,414 | 4,134 | 68,037 | 106 | 92 | 1,086 | 67,043 | (*n*) 105 | 4,239 |
| Grand total, Presidency .. | 12,056,060 | 18,837 | 4,170 | 83,642 | 11,976,588 | 18,712 | 427,840 | 668 | 53,241 | 44,369 | 436,712 | 682 | 19,394 |

(*a*) Disafforested in March 1917 but was omitted to be deducted in previous year.
(*b*) 193 acres due to disafforestation and the balance is due to adoption of areas of S.I. maps.
(*c*) Disafforested.
(*d*) Excluded at settlement.
(*e*) Transferred to reserved forest.
(*f*) Difference between area of section 16 notification and section 4 notification.
(*g*) Revised figures furnished by the District Forest Officer.
(*h*) Transferred to reserved forests.
(*i*) Toda patta lands.
(*j*) Excluded at settlement.
(*k*) Omitted to be shown in the previous year.
(*l*) Disafforested.
(*m*) Wrongly included in the previous years.
(*n*) Corrected in the Chief Conservator's office.

## ANNUAL FORM No. 66.

*Forest Department, Madras Presidency.*

Progress made in forest settlements during the year 1918–19.

| Forest district. | Name of forest. | Area in square miles. | | | Cost during the year. | | Entire cost per square mile of areas finally settled. | Government notification of settlement. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Finally settled during the year. | In hand at commencement of the year. | Taken in hand during the year. | In forest accounts. | In other accounts. | | Number. | Date. |
| | *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS. | | RS. | NO. | |
| Ganjam .. | Block I, Part of Galleri extension No. I. | .. | .. | 0·057 | .. | .. | .. | .. | .... |
| | Block II, Galleri extension No. I. | .. | .. | 0·168 | .. | .. | .. | .. | .... |
| | Block III, Galleri extension No. I. | .. | .. | 0·029 | .. | .. | .. | .. | .... |
| | Block IV, Galleri extension No. I. | .. | .. | 1·060 | .. | .. | .. | .. | .... |
| | Block V, Kullada extension No. I. | .. | .. | 0·685 | .. | .. | .. | .. | .... |
| | Ambazara extension No. I (Gobopodoro enclosure). | .. | .. | 0·162 | .. | .. | .. | .. | .... |
| | Chendragiri extension (Kutnikuppa bit A/2). | .. | .. | 0·105 | .. | .. | .. | .. | .... |
| | Extension of Pippalaponka reserved forest. | .. | .. | 0·015 | .. | .. | .. | .. | .... |
| Visagapatam. | Sitakhandi reserve extension block I. | .. | .. | ·009 | .. | .. | .. | .. | .... |
| Godavari, Upper. | Nugur .. .. .. .. | .. | 246·61 | .. | .. | .. | .. | .. | .... |
| | Pedamidisilera .. .. | .. | 96·48 | .. | .. | .. | .. | .. | .... |
| | Cherla .. .. .. | .. | .. | 56·160 | .. | .. | .. | .. | .... |
| Godavari, Lower. | Coringa extension .. .. | .. | * 74·86 | .. | .. | .. | .. | .. | .... |
| | Birampalli .. .. .. | .. | .. | 2·804 | .. | .. | .. | .. | .... |
| | Venulakonda .. .. .. | .. | .. | 5·244 | .. | .. | .. | .. | .... |
| | Palam .. .. .. | .. | .. | 2·083 | .. | .. | .. | .. | .... |
| | Nurupudi .. .. .. | .. | .. | 2·315 | .. | .. | .. | .. | .... |
| | Total .. | .. | 417·95 | 70·896 | .. | .. | .. | .. | .... |
| | *Central Circle.* | | | | | | | | |
| Bellary .. | Daroji tank shore .. .. | .. | .. | 2·89 | .. | .. | .. | .. | .. |
| Anantapur .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntur .. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North. | Ganugapenta extension B block. | .. | 0·007 | .. | .. | .. | .. | .. | .. |
| | Dasaripalli .. .. .. | .. | 0·17 | .. | .. | .. | .. | .. | .. |
| | Kavalakuntla extension B .. | .. | 0·002 | | | | | | |
| | Kalasapad extension .. .. | .. | 0·027 | .. | .. | .. | .. | .. | .. |
| | Dasarapalli extension .. | .. | 0·31 | .. | .. | .. | .. | .. | .. |
| | Lankamalais extension .. | .. | 0·09 | .. | 229 | .. | .. | .. | .. |
| | Lankamalai .. .. .. | .. | 0·005 | .. | 47 | .. | .. | .. | .. |
| Cuddapah, South. | Kokiletikanama extension B. | .. | .. | 0·0083 | .. | .. | .. | † | .. |
| | Kodur hill extension .. .. | .. | .. | 0·0031 | .. | .. | .. | | |
| | Chitvel extension B .. .. | .. | .. | 0·002 | 78 | .. | .. | | |
| | Chitvel extension A-2 .. | .. | .. | 0·0051 | .. | .. | .. | | |
| Cuddapah, West. | Putlampalli shrotriyam R.F. | .. | 2·76 | .. | 600 | .. | .. | .. | .. |
| | Chinnakampalli fields .. | 0·03 | .. | .. | .. | .. | .. | 824 | 27th June 1919. |
| | Ganganapalli Idupulapaya addition. | .. | 1·65 | .. | .. | .. | .. | .. | .. |
| | Fields in Machupalli within Kanamalopalli extension reserve. | .. | 0·0049 | .. | .. | .. | .. | .. | .. |
| | Fields in Madhavaram village in Konarajupalli extension. | .. | 0·0031 | .. | .. | .. | .. | .. | .. |
| | Fields in Chuntarajupalli in Vontimitta extension. | .. | 0·0121 | .. | .. | .. | .. | .. | .. |
| | Fields in Gadikotta R.F. .. | 0·0044 | .. | .. | .. | .. | .. | 61 | 14th Feb. 1919. |
| | Addition to Surabhu .. .. | .. | 0·02 | .. | .. | .. | .. | .. | .. |
| | Fields of Hasanapuram village within Palakonda R.F. | .. | .. | 0·349 | .. | .. | .. | .. | .. |
| | Fields of Vangimalla within Palakonda extension C. | .. | .. | 0·209 | .. | .. | .. | .. | .. |
| | Fields of Hasanapuram village within Palakonda extension C. | .. | .. | 0·065 | .. | .. | .. | .. | .. |
| | Fields of Gopakudipalli village within Idupulapaya reserve. | .. | .. | 0·012 | .. | .. | .. | .. | .. |
| | Fields of Guval cheruvu village within Idupulapaya reserve. | .. | .. | 0·007 | .. | .. | .. | .. | .. |
| | Fields of Cheelakampalli village within Idupulapaya reserve. | .. | .. | 0·006 | .. | .. | .. | .. | .. |

* Excludes 10·42 acres transferred to the Salt department.

† In notification No. 561 in pages 1429 and 1430 of *Fort St. George Gazette*, dated 29th December 1917.

## Progress made in forest settlements during the year 1918–19—*cont.*

| Forest district. | Name of forest. | Area in square miles. | | | Cost during the year. | | Entire cost per square mile of areas finally settled. | Government notification of settlement. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Finally settled during the year. | In hand at commencement of the year. | Taken in hand during the year. | In forest accounts. | In other accounts. | | Number. | Date. |
| | *Central Circle*—cont. | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS. | | | | |
| Cuddapah West—*cont.* | Fields of Chenchuvaripenta village within Idupulapaya reserve. | .. | .. | 0·014 | .. | .. | .. | .. | .. |
| | Fields of Brahmana Erragudipalli within Idupulapaya reserve. | .. | .. | 0·031 | .. | .. | .. | .. | .. |
| | Fields of Brahmana Erragudipalli within Idupulapaya extension. | .. | .. | 0·062 | .. | .. | .. | .. | .. |
| | Fields of Chintarajupalli within Vontimitta extension. | .. | .. | 0·045 | .. | .. | .. | .. | .. |
| | Fields of Nandimandalam village within Ganganapalli reserve. | .. | .. | 0·018 | .. | .. | .. | .. | .. |
| Nellore .. | Addition to Prabhagiripatnam R.F. | .. | 0·040 | .. | 480 | .. | .. | .. | .. |
| | Addition to Dachur .. .. | 0·085 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Yellasiri R.F. .. | .. | 0·025 | .. | .. | .. | .. | .. | .. |
| | Do. Kottapatam .. | 0·020 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Telugurayapuram. | 0·025 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Rapur Veligonda B. | 0·005 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Guvvadi, West .. | 0·080 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Udyagiri Durgam A. | 0·010 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Tummalapenta, West. | .. | 0·015 | .. | .. | .. | .. | .. | .. |
| | Do. Tummalapenta, North. | .. | 0·005 | .. | .. | .. | .. | .. | .. |
| | Do. Chinna Avalur extension. | .. | 0·015 | .. | .. | .. | .. | .. | .. |
| | Do. Veligandla .. | .. | 0·015 | .. | .. | .. | .. | .. | .. |
| | Do. Chagollu A. .. | 0·030 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Nandavaram A. | 0·015 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Nandavaram B extension. | 0·045 | .. | .. | .. | .. | .. | .. | .. |
| | Do. Mogilicherla, West. | 0·020 | .. | .. | .. | .. | .. | .. | .. |
| | Kavali extension No. III .. | 1·450 | .. | .. | .. | .. | .. | .. | .. |
| | Addition to Dogadarthi .. | 0·031 | .. | .. | .. | .. | .. | .. | .. |
| | Rapur Veligonda A-1 extension. | .. | .. | 10·586 | .. | .. | .. | .. | .. |
| Chingleput. .. | Kattankolathur extension II. | .. | (a) 0·017 | .. | 396 | .. | .. | .. | .. |
| Chittoor .. | Addition to Gundlur R.F. .. | 0·007 | .. | .. | .. | .. | .. | G.O. 189, Rev. | 14th Aug. 1918. |
| | Addition to Ankalammakonda R.F. | 0·041 | .. | .. | .. | .. | .. | G.O Mis. 106 Rev. | 22nd Jan. 1919. |
| | Addition to Reddikunta .. | 0·006 | .. | .. | .. | .. | .. | G.O. Mis. 291. | 18th Feb. 1919. |
| | Addition to Whitesides Garden. | .. | .. | 0·007 | .. | .. | .. | .. | .. |
| | Total .. | 1·9044 | 5·1931 | 14·319 | 1,830 | .. | .. | .. | .. |
| | *Southern Circle.* | | | | | | | | |
| Vellore, North. | Tiruvallam plantation .. | .. | 0·68 | .. | .. | .. | .. | .. | .. |
| | Virinjipuram ,, .. | 0·49 | 0·49 | .. | 94 | .. | .. | G.O. 744, Rev. (Spl). | 24th April 1919. |
| | Ammundi ,, .. | .. | 0·25 | .. | .. | .. | .. | .. | .. |
| | Vannivedu ,, .. | .. | 0·09 | .. | .. | .. | .. | .. | .. |
| | Kilminnal ,, .. | .. | 0·23 | .. | .. | .. | .. | .. | .. |
| | Addition to Punganur .. | .. | (a) | .. | .. | .. | .. | .. | .. |
| Vellore, South. | Arasempet extension .. .. | 0·04 | 0·04 | .. | 71 | .. | .. | G.O. 606, Rev. (Spl). | 25t Oct. 1918. |
| | Malayalam ,, .. .. | .. | 0·35 | (b) | .. | .. | .. | .. | .. |
| | Santavasal ,, .. .. | .. | 0·15 | | | | | | |
| | Vehimalai ,, .. .. | .. | .. | 0·01 | .. | .. | .. | G.O. 689, Rev. (Spl). | 11th April 1919. |
| Vellore, West. | Mambakkam extension .. | .. | 0·35 | .. | .. | .. | .. | .. | .. |
| Salem, North. | Hudaidurgam 4 blocks .. | .. | 38·00 | .. | .. | .. | .. | .. | .. |
| | Sholapadi A extension .. | .. | 0·27 | .. | .. | .. | .. | .. | .. |
| | Varattanapalli extension .. | .. | 0·07 | .. | 441 | .. | .. | .. | .. |

(a) Omitted to be shown in the last year's return in the next column.
(b) Less than an acre.

## Progress made in forest settlements during the year 1918–19—*cont.*

| Forest districts. | Name of forest. | Area in square miles. | | | Cost during year. | | Entire cost per square mile of areas finally settled. | Government notification of settlement. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Finally settled during year. | In hand at commencement of year. | Taken in hand during year. | In forest accounts. | In other accounts. | | Number. | Date. |
| | *Southern Circle*—cont. | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS. | | | | |
| Salem, South. | Arana Tirtagiri .. .. | .. | 5·92 | (*c*) | .. | .. | .. | .. | .. |
| | Jarugumalai .. .. .. | .. | 11·94 | | | | | | |
| | Pallipatti extension .. .. | .. | 5·72 | | | | | | |
| Trichinopoly. | Ariyur shola block .. .. | 1·70 | 1·70 | (*b*) | 270 | .. | .. | G.O. 467. | 1st Oct. 1918. |
| | Shelur extension block .. | 0·83 | 0·83 | .. | .. | .. | .. | G.O. 737. | 21st Nov. 1918. |
| | Amayapuram .. .. .. | .. | .. | 0·01 | .. | .. | .. | G.O. 708, Rev. (Spl). | 14th Nov. 1918. |
| | Methalamalai .. .. .. | .. | .. | 0·01 | .. | .. | .. | G.O. 839, Rev. (Spl). | 1st May 1919. |
| Madura. .. | Addition to Shengalvarayar reserve. | 0·01 | 0·01 | .. | 618 | .. | .. | G.O. Mis. 721, Rev. | 18th Nov. 1918. |
| Tinnevelly. | Karumandiamman shola and Mahendragiri. | .. | 0·16 | .. | .. | .. | .. | .. | .. |
| | Mullakad block .. .. | .. | 1·48 | .. | .. | .. | .. | .. | .. |
| | Hare Island for Tuticorin harbour. | .. | .. | 0·22 | .. | .. | .. | G.O. Mis. 123, Rev. (Spl). | 23rd Jan. 1919. |
| | Punnadi Island for Tuticorin harbour. | .. | .. | 0·16 | .. | .. | .. | | |
| | Hope estate .. .. .. | .. | .. | 0·29 | .. | .. | .. | G.O. 792, Rev. (Spl). | 29th Nov. 1918. |
| | Total .. | 3·07 | 68·73 | 0·70 | 1,494 | .. | .. | .. | .. |
| | *Western Circle.* | | | | | | | | |
| Mangalore, North. | Kursegudde extension No. I. | .. | .. | .. | .. | .. | .. | 184 | 12th May 1919. |
| | Doddinamane extension No. I. | .. | .. | 0·052 | .. | .. | .. | 50 | 5th Feb. 1919. |
| | Mettukallagudde extension No. I. | .. | .. | 0·074 | .. | .. | .. | | |
| Malabar, North. | Kanoth additions Nos. I to III. | ·62 | ·62 | .. | .. | .. | .. | 3 | 7th Jan. 1919. |
| | | *—·08 | | | | | | | |
| Malabar, South. | Kottanikunnu .. .. | ·19 | ·19 | .. | .. | .. | .. | 59 | 18th Sep. 1918. |
| The Nilgiris. | Rangaswami Peak .. .. | .. | 2·23 | .. | .. | .. | .. | .. | .. |
| | Arambi addition No. I .. | .. | ·12 | .. | 100 | .. | .. | .. | .. |
| | Mikkerubettu addition .. | ·04 | ·04 | .. | † 10,295 | .. | .. | 23 | 21st Jan. 1919. |
| Coimbatore, North. | Enclosures in South Bargur reserve and its additions. | ·160 | ·160 | .. | .. | .. | .. | 325 | 2nd July 1918. |
| | Enclosures in North Bargur reserve and its additions. | .. | ·198 | .. | .. | .. | .. | .. | .. |
| | Enclosures in Gutialattur reserve. | ·672 | ·672 | .. | .. | .. | .. | 123 | 3rd Dec. 1918. |
| Coimbatore, Central. | Thamburattipottai addition No. I. | .. | .. | ·011 | .. | .. | .. | 9 | 7th Jan. 1919. |
| | Dhoni extension No. I .. | .. | .. | ·001 | .. | .. | .. | 15 | 23rd July 1918. |
| | Nellimalai addition No. I .. | .. | .. | ·003 | .. | .. | .. | 117 | 26th Nov. 1918. |
| | Total .. | 1·602 | 4·23 | 0·141 | 10,395 | .. | .. | .. | .. |
| | Grand total, Presidency .. | 6·57 | 496 | 86·05 | 13,719 | .. | .. | .. | .. |

(*b*) Difference is due to correct area notified in the Government Order.

(*c*) Figure given by the District Forest Officer. * Excluded at settlement.

† Additional compensation awarded for the acquisition of the Mudumalai forests.

## Annual Form No. 67.

*Forest Department, Madras Presidency.*

Record of demarcation and maintenance of boundaries during 1918–19.

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of the year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new work. | On repairs. |
| *Northern Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Ganjam .. .. | .. | (*h*) 7<br>(*a*) 1,353 | 8 | (*h*) 1,368 | .. | (*i*) 80 | (*j*) 1,448 | .. | (*k*) 97<br>(*c*) 600 |
| Vizagapatam .. | .. | 24<br>(*a*) 540 | .. | 564 | .. | 19 | 583 | .. | 131 |
| Godāvari, Upper .. | 3 | (*b*) 406 | .. | 409 | 3 | 143 | 555 | 209 | 127<br>(*c*) 958 |
| Do. Lower (*d*) .. | .. | .. | 5 | | | | | | 28 |
| | | (*a*) 723 | (*e*) — 5 | 723 | .. | 51 | 774 | .. | (*c*) 956 |
| Kistna .. .. | .. | 52<br>(*a*) 375 | 122<br>(*e*) — 2 | 547 | .. | 40 | 587 | .. | 228<br>(*c*) 2 |
| Kurnool, East .. | (*g*) 14 | .. | 124 | | | | | | |
| | | (*a*) 579 | (*e*) — 124 | 593 | 19 | 48 | 660 | 110 | 20 |
| Do. South .. | .. | .. | 28 | | 5 | | | | |
| | | (*a*) 604 | | 632 | (*f*) — 5 | 5 | 637 | .. | .. |
| Do. West .. | 1 | 108<br>(*a*) 384 | 436<br>(*e*) — 7 | 922 | .. | 100 | 1,022 | 41 | 397<br>(*c*) 29 |
| Total .. | 18 | 597<br>(*a*) 4,558 | 585 | 5,758 | 22 | 486 | 6,266 | 360 | 1,028<br>(*c*) 2,545 |
| *Central Circle.* | | | | | | | | | |
| Bellary .. .. | 26 | 813 | 872 | 1,711 | 6 | .. | 1,717 | 1,008 | 51 |
| Anantapur .. .. | .. | 54 | 1,792 | 1,846 | .. | .. | 1,846 | .. | 487 |
| Guntūr .. .. | .. | .. | 1,339<br>(*a*) —15 | 1,324 | .. | .. | 1,324 | .. | (*b*) 243 |
| Cuddapah, North .. | .. | 181 | 380 | 560 | .. | 13 | 573 | .. | 210 |
| Do. South .. | .. | 1<br>(*c*) 13 | 311 | 326 | .. | 40 | 366 | .. | 20 |
| Do. West .. | .. | (*c*) 467 | 932 | 1,399 | .. | 22 | 1,421 | .. | (*c*) 801 |
| Nellore .. .. | .. | (*c*) 539<br>149 | 1,286 | (*d*) 1,974 | .. | 84 | 2,058 | .. | 809 |
| Chingleput .. .. | 3 | 851 | .. | 854 | .. | .. | 854 | 177 | 203 |
| Chittoor .. .. | 2 | 1,446 | .. | 1,448 | .. | 60 | 1,508 | 56 | 731 |
| Total .. | 31 | 3,495<br>(*c*) 1,019 | 6,897 | 11,442 | 6 | 219 | 11,667 | 1,241 | 3,555 |

*Note for Northern Circle.*

(*a*) Cleared by subordinates free of cost.
(*b*) Cleared by hill tribes for fire protection, the cost being debited to A VIII (*f*).
(*c*) Cost of works other than boundaries of forests finally notified.
(*d*) Revised figures furnished by the District Forest Officer.
(*e*) Length of boundaries of forests disafforested.
(*f*) Expunged not being the boundaries of notified forests.
(*g*) Newly demarcated on account of disafforestation of forests.
(*h*) Excludes 547 miles belonging to the Parlakimedi mahals.
(*i*) Do. 14 do. do.
(*j*) Do. 561 do. do.
(*k*) Do. Rs. 10 for widening the lines above ghats in Chandragiri range.

*Note for Central Circle.*

(*a*) Deduction made due to disafforestation.
(*b*) Represents cost of collection of stones to demarcate ten miles of Pothumaraka reserve, but actual demarcation has not yet been done.
(*c*) Cleared by subordinates free of cost.
(*d*) The difference between columns 3 and 4 and column 5 of the previous year's return was due to the incorporation of enclosures with the main reserves whereby their boundaries have been abandoned.
(*e*) Rupees 756 relating to compensation awarded for acquisition of certain fields has been wrongly included under A-VIII (*a*) by the Accountant-General, instead of A-VIII (*b*).

Record of demarcation and maintenance of boundaries during 1918-19—*cont.*

| District. | Length of boundaries artificially demarcated during the year. | Length of previously existing boundaries repaired. | Length of previously existing boundaries not repaired. | Total length of artificially marked boundaries at the close of the year. | Length of boundaries still to be demarcated at the close of year. | Length of natural boundaries not requiring artificial marks. | Total length of boundaries at the close of the year. | Expenditure on demarcation during the year. | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | On new works. | On repairs. |
| *Southern Circle.* | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | MILES. | RS. | RS. |
| Vellore, North .. | .. | 1,079 (a)—5 | .. | 1,074 | .. | 11 | 1,085 | .. | 301 |
| Do. South .. | .. | 708 | .. | 708 | .. | 15 | 723 | .. | 681 |
| Do. West .. | .. | 442 | 61 | 503 | .. | 13 | 516 | (b) 119 | 240 |
| South Arcot .. .. | .. | 890 | .. | (c) 890 | .. | .. | 890 | .. | 8 |
| Salem, North .. | 23 | 895 | 453 | 1,371 | .. | 40 | 1,411 | 269 | 6 |
| Do. South .. | .. | 1,025 | 56 | 1,081 | .. | 5 | 1,086 | .. | 369 |
| Trichinopoly .. .. | 1 | (d) 882 | 35 | 918 | 64 | .. | 982 | .. | .. |
| Madura .. .. | 25 | 933 | 588 | 1,544 | 15 | 178 | 1,737 | 2,183 | 34 |
| Tinnevelly .. .. | .. | .. | 504 (a)—3 | 501 | .. | 14 | 515 | .. | .. |
| Total .. | 47 | 6,849 | 1,694 | 8,590 | 79 | 276 | 8,945 | (l) 2,571 | (l), (m) 958 |
| *Western Circle.* | | | | | | | | | |
| Mangalore, North .. | .. | 20 | 1,213 | 1,233 | .. | 103 | 1,336 | .. | 197 |
| Do. South .. | .. | .. | 1,130 | 1,130 | 46 | 101 | 1,277 | .. | (g) 681 |
| Malabar, North .. | 11 | (e) 162 (f) 15 | 1,008 | 1,196 | 12 | 36 | 1,244 | 1,091 (i) 229 | .. |
| Do. South .. | .. | 8 (e) 63 | 60 | 131 | 20 | 55 | 206 | .. | 759 |
| The Nilgiris .. .. | 11 | 7 (f) 43 | 1,523 | 1,584 | 9 (g) 1 | 299 | 1,893 | 297 | 583 (g) 26 |
| Kollegal .. .. | .. | 1 | 169 | 170 | 222 | 87 | 479 | .. | 51 (k) 546 |
| Coimbatore, North .. | .. | 46 (f) 206 | 290 | 542 | (f) 42 | (j) 89 | 673 | .. | 1,274 |
| Do. Central. | .. | 21 (f) 118 | 432 | 571 | 27 | 50 | 648 | .. | 750 |
| Do. South .. | .. | (k) 4 (f) 116 (e) 20 | 88 | 228 | .. | 72 | 300 | .. | (h) 37 |
| Total .. | 22 | 107 (e) 245 (f) 498 | 5,913 | 6,785 | 379 | 892 | 8,056 | 1,617 | 4,904 |
| Grand total, Presidency. | 118 | 7,712 (f) 9,656 | 15,089 | 32,575 | 486 | 1,873 | 34,934 | 5,789 | 12,990 |

*Note for Southern Circle*—The total cost comes to .. .. .. .. .. .. .. RS. 3,529
Deduct amount of minus entry in Tinnevelly .. .. .. .. 159
Amount as per form 80 .. 3,370

(a) Disafforested area.
(b) Amount spent in cutting lines and putting up cairns in connexion with delimitation work under Land Revenue administration.
(c) The decrease from the last year's figure is due to disafforestation of certain reserves.
(d) The difference between columns 3 and 4 and column 5 of last year is due to correct figure furnished by the District Forest officer.
(e) Cleared for fire-protection, the cost being debited to A-VIII (f).
(f) Cleared by subordinates free of cost.
(g) Preliminary demarcation.
(h) Cost of construction of cairn, preparing stores, demarcation of temples, etc.
(i) Expenditure on incomplete works of the previous year.
(j) Fourteen miles transferred from column 7 to 6 owing to the revised notification of boundaries of North Bargur reserved forest.
(k) Portion of Coimbatore-Travancore boundary-cost debited to XXV. Political.
(l) The difference between this and the Accountant-General's audited figures is due to a mines entry in Tinnevelly (Rs. 159).
(m) The figures in this column when totalled come to Rs. 1,639.

## Annual Form No. 69.

*Forest Department, Madras Presidency.*

Progress made in working-plans during 1918–19.

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area as per Form No. 65. |
|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| | | | *Reserved forests.* | | | | |
| *Northern Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. |
| Ganjām .. .. | 623 | .. | .. | .. | .. | .. | 623 |
| Vizagapatam .. | 145 | (*a*)—14 | .. | 42 | 56 | 83 | 312 |
| Gōdāvari, Upper .. | 165 | .. | .. | .. | 270 | .. | 435 |
| Do. Lower .. | 254 (*b*)—1 | 38 | 70 (*c*) —70 | .. | 109 (*d*) —2 | .. | 398 |
| Kistna .. .. | 149 (*d*)—1 | 92 | .. | .. | .. | 24 | 264 |
| Kurnool, East .. | 147 .. | .. | 193 (*d*) — 11 | .. | 657 (*d*)—16 | .. | 970 |
| Do. South .. | 679 | .. | 81 | .. | .. | .. | 760 |
| Do. West .. | 468 (*d*)—6 | .. | .. | .. | .. | 397 | 859 |
| Total .. | 2,622 | 116 | 263 | 42 | 1,074 | 504 | 4,621 |
| | | | *Reserved lands.* | | | | |
| Ganjam .. .. | .. | .. | .. | .. | 2 | .. | 2 |
| Vizagapatam .. | .. | .. | .. | .. | (*e*) 2 | .. | 2 |
| Gōdavari, Upper .. | .. | .. | .. | .. | .. | 399 | 399 |
| Do. Lower .. | .. | .. | .. | .. | 87 | .. | 87 |
| Kistna .. .. | .. | .. | .. | .. | .. | 1 | 1 |
| Total .. | .. | .. | | .. | 91 | 400 | 491 |
| Grand total .. | 2,622 | 116 | 263 | 42 | 1,165 | 904 | 5,112 |
| *Central Circle.* | | | | | | | |
| Bellary .. .. | 64 | .. | 93 | .. | 292 | 155 | 604 |
| Anantapur .. | 425 | .. | .. | .. | 324 | .. | 749 |
| Guntūr .. .. | .. | .. | 243 | (*a*) .. | 563 | .. | 806 |
| Cuddapah, North .. | 50 | .. | .. | (*b*) 17 | 529 | .. | 596 |
| Do. South .. | 107 | .. | .. | .. | (*c*) .. | 355 | 462 |
| Do. West .. | 35 | .. | 1 | 27 | 685 | 4 | 752 |
| Nellore .. .. | (*d*) 12 | .. | (*e*) 8 | 186 | 396 | 129 | 731 |
| Chingleput .. | 185 | (*f*) .. | .. | .. | .. | 22 | (*f*) 207 |
| Chittoor .. .. | 33 | .. | 157 | 7 | 630 | .. | 827 |
| Total .. | 911 | .. | 502 | 237 | 3,419 | 665 | 5,734 |
| *Southern Circle.* | | | | | | | |
| North Vellore .. | 463 (*a*) —2 (*b*) —53 | .. | 2 | .. | .. | 51 | 461 |
| South do. .. | 410 (*c*) + 1 | .. | .. | .. | 8 | .. | 419 |
| West do. .. | 328 | .. | .. | .. | .. | .. | 328 |
| South Arcot . | 186 (*d*) —118 | 47 | .. | 52 | 3 | 111 | 281 |
| North Salem .. | 263 (*e*) — 1 | .. | 366 | .. | 171 | .. | 799 |
| South do. .. | 495 | .. | 63 | .. | .. | .. | 558 |
| Trichinopoly .. | 200 (*c*) + 2 | .. | 18 | .. | 46 | 43 | 309 |
| Madura .. .. | 351 | .. | .. | .. | 297 | 12 | 660 |
| Tinnevelly .. | 236 | 1 | .. | .. | 16 | 175 | 428 |
| Total .. | 2,761 | 48 | 449 | 52 | 541 | 392 | 4,243 |

*Note for Northern Circle.*
(*a*) Cancelled working plans ; transferred to column (5).
(*b*) Exclusion of fractions.
(*c*) Transferred to column (6).
(*d*) Disafforested.
(*e*) Leased forests.

*Note for Central Circle.*
(*a*) Due to the omission of 247 square miles entered in this column in 1917–18 on account of the proposal to disafforest certain useless reserves as per B.P. Forest Mis. No. 266, dated 3rd May 1919.
(*b*) Due to revised figures furnished by the District Forest Officer.
(*c*) The figure in column (6) of last year's return is brought to column (7) in the current year by the District Forest Officer as working plan is stated to be not required at present.
(*d*) Due to the cessation of the period of working plans
(*e*) Due to cancellation of working scheme for 13·90 square miles.
(*f*) Revised figures furnished by the District Forest Officer.

*Note for Southern Circle.*
(*a*) Wrongly shown in columns (2) and (7) of the previous year's return.
(*b*) Represents the area of forests the working plan in respect of which was cancelled in B.P. Forest Mis. No. 120, dated 27th March 1918.
(*c*) Correct figure furnished by the District Forest Officers.
(*d*) Working plan for the old Kallakurchi range was ordered to be kept in abeyance in favour of the five years' scheme sanctioned in B.P. Forest Mis. No. 110, dated 12th February 1919.
(*e*) Due to disafforestation of Gundakkal reserve.

## Progress made in working-plans during 1918-19—*cont.*

| District. | Areas for which working-plans have been completed and approved by the Board. | | Areas for which working-plans are being compiled or have been compiled but not sanctioned. | | Areas for which working-plans have still to be taken in hand. | Areas for which working-plans are not at present required. | Total forest area as in form No. 65. | Entire cost per square mile of working plans completed. |
|---|---|---|---|---|---|---|---|---|
| | At commencement of the year. | During the year. | At commencement of the year. | Taken in hand during the year. | | | | |
| | | | *Reserved forests.* | | | | | |
| *Western Circle.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | RS. |
| Mangalore, North. | 358 | .. | .. | .. | 4 | .. | 362 | |
| Do. South. | 436 | .. | .. | .. | .. | .. | 436 | |
| Malabar, North .. | 178 | .. | .. | .. | 85 | .. | 263 | |
| Do. South .. | 7 | .. | .. | 96 | .. | 37 | 140 | |
| The Nilgiris .. | 107 | .. | .. | .. | .. | 358 | 465 | |
| Kollegal .. .. | 53 | .. | 22 | .. | 160 | 496 | 731 | |
| Coimbatore, North. | 316 | .. | .. | 31 | 556 | .. | 917 | |
| | (*a*) + 14 | | | | | | | |
| Coimbatore, Central. | 239 | .. | 24 | .. | 74 | 99 | 362 | |
| | (*b*) — 74 | | | | | | | |
| Coimbatore, South. | (*c*) 93 | .. | .. | .. | 334 | .. | 427 | |
| Total .. | 1,727 | .. | 46 | 127 | 1,213 | 990 | 4,103 | |
| | | | *Reserved lands.* | | | | | |
| Mangalore, North.. | .. | .. | .. | .. | * | .. | * | |
| Malabar, North .. | .. | .. | .. | .. | .. | * | * | |
| The Nilgiris .. | .. | .. | .. | .. | 1 | † 7 | 8 | |
| Coimbatore, North. | .. | .. | .. | .. | * | .. | 1 | |
| Do. Central. | .. | * | .. | .. | .. | .. | * | |
| Total .. | .. | * | .. | .. | 1 | 7 | 9 | |
| | | | *Leased forests.* | | | | | |
| Malabar, South .. | 24 | .. | .. | .. | .. | .. | 24 | |
| The Nilgiris .. | 76 | .. | .. | .. | .. | .. | 76 | |
| Coimbatore, South. | .. | 27 | .. | .. | .. | .. | 27 | |
| Total .. | 100 | 27 | .. | .. | .. | .. | 127 | |
| Grand total, W.C. | 1,827 | 27 | 46 | 127 | 1,214 | 997 | 4,239 | |
| Grand total, Presidency. | 8,121 | 191 | 1,260 | 458 | 6,248 | 2,558 | (*d*)19,328 | |

* Less than one square mile. † Includes 4 square miles of Todapatta lands.

(*a*) Omitted to be shown in the returns of the previous year.

(*b*) Area of the working plans cancelled.

(*c*) Revised figure furnished by the District Forest Officer.

(*d*) Excludes 66 square miles of reserved lands in the southern.

## Annual Form No. 70.

*Forest Department, Madras Presidency.*

## Communications and Buildings during 1918-19.

| District. | Roads (including bridle-paths and culverts) | | | | Buildings. | | Other works. | |
|---|---|---|---|---|---|---|---|---|
| | New works. | | Repairs. | | Cost of new works. | Cost of repairs. | Cost of new works. | Cost of repairs. |
| | Length. | Cost. | Length. | Cost. | | | | |
| *Northern Circle.* | M. F. CH. | Rs. | M. F. CH. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Direction .. .. .. | .. | .. | .. | .. | .. | 45 | .. | .. |
| Ganjam .. .. .. | 4 0 0 | 3,037 | 36 5 0 | 416<br>(a) 403 | 1,151 | (h) 3,891<br>(a) 1,762 | 157 | 35 |
| Vizagapatam .. .. | 2 7 0 | 200 | 10 0 0 | 392 | (b) 11 | 383<br>(a) 821 | .. | 1 |
| Godavari, Upper .. | 0 2 0 | 93<br>(c) 268 | 57 4 0 | 310 | 713 | 1,706<br>(a) 690 | .. | 56 |
| Do. Lower .. | .. | .. | 34 0 0 | 1,657 | 586 | 2,263<br>(a) 2,068 | .. | .. |
| Kistna .. .. .. | .. | .. | 12 4 0 | 381 | .. | 251<br>(a) 140 | .. | 223 |
| Kurnool, East .. .. | 16 3 5 | 4,660 | 70 3 0 | 1,208 | 1,496 | 1,425<br>(a) 1,145 | 886 | 349 |
| Do. South .. .. | .. | .. | 38 0 0 | 1,434 | 1,418 | 180<br>(a) 340 | 113 | 225 |
| Do. West .. .. | .. | (c) 184 | 25 2 0 | 1,430 | .. | 932<br>(a) 790 | 10 | 136 |
| Total .. | 23 4 5 | 8,442 | 284 2 0 | 7,631 | 5,375 | 18,832 | 1,166 | 1,025 |
| *Central Circle.* | | | | | | | | |
| Bellary .. .. .. | .. | .. | .. | .. | 245 | 918 | .. | 1 |
| Anantapur .. .. | .. | .. | 2 4 5 | 196 | .. | 2,360 | .. | .. |
| Guntur .. .. .. | .. | .. | 3 0 0 | 365 | 2,056 | 1,207 | .. | 4 |
| Cuddapah, North .. | 1 6 0 | 145 | 9 4 0 | 226 | 1,387 | 1,464 | 31 | 70 |
| Do. South .. | 16 4 0 | 2,780 | 72 5 5 | 1,902 | 6,397 | 1,342 | .. | 41 |
| Do. West .. .. | 8 1 8 | 1,713 | 7 0 0 | 316 | 2,921 | 1,181 | 176 | 122 |
| Nellore .. .. | 2 4 0 | 24 | 8 7 5 | 33 | 413 | 2,413 | 249 | 19 |
| Chingleput .. .. | 0 5 8 | 207 | 15 6 0 | 769 | 987 | 2,664 | .. | 162 |
| Chittoor .. .. | 7 4 0 | 2,535 | 37 7 0 | 1,359 | 2,867 | 2,621 | 253 | 278 |
| Total .. | 37 1 6 | 7,404 | 157 2 5 | 5,166 | 17,273 | 16,170 | 709 | 697 |
| *Southern Circle.* | | | | | | | | |
| Vellore, North .. .. | (a)11 2 0 | 2,014 | 17 6 0 | 700 | 1,649 | 684<br>(b) + 598<br>(c) + 5 | 5 | .. |
| Do. South .. .. | .. | .. | 5 2 0 | 190 | 6,366 | 327<br>(b) + 201 | 555 | 11 |
| Do. West .. .. | .. | (g) 324 | 18 6 0 | 1,103 | 6,577 | 2,085<br>(b) + 214 | 1,113 | 224 |
| South Arcot .. .. | (e) 7 4 0 | 31 | 19 0 0 | 67 | 2,963 | 115<br>(b) + 465 | .. | 29 |
| Salem, North .. .. | .. | .. | 72 0 0 | 1,348 | 270 | 1,584<br>(b) + 233 | .. | 53 |
| Do. South .. .. | 5 4 0 | 361 | 29 0 0 | 341 | 4,133 | 347<br>(b) + 843 | 93 | 100 |
| Trichinopoly .. .. | 2 0 0 | 384 | 114 0 0 | 1,747<br>(d)-1,462 | 1,206 | 359<br>(b) + 363 | 128 | .. |
| Madura .. .. .. | 8 3 0 | 5,104 | 199 5 0 | 8,077<br>(b)+904 | 11,434 | 2,163<br>(b)+ 1,172 | 697 | 32 |
| Tinnevelly .. .. | 5 0 0 | 2,896 | 48 0 0 | 933 | 1,637 | 1,118<br>(b) + 530 | .. | 6 |
| Forest Engineer .. .. | 25 0 0 | (f) 37,036 | 13 6 0 | 10,713 | .. | .. | .. | .. |
| Total .. | 64 5 0 | 48,650 | 537 1 0 | 24,661 | 36,235 | 13,406 | 2,591 | 455 |
| *Western Circle.* | | | | | | | | |
| Mangalore, North .. | 13 5 0 | 1,308 | 22 2 0 | 263 | 2,457 | 400<br>† 191<br>* — 18 | 482 | 29 |
| Do. South .. | 4 5 0 | 1,476 | 30 0 0 | 477 | 3,923 | 404 | 157 | 140 |
| Malabar, North .. .. | 8 0 0 | 405 | 104 0 0 | 2,174 | 2,007 | 282<br>* † 267 | .. | 3 |
| Do. South .. .. | 8 3 0 | 988 | 52 6 0 | 2,403 | 20 | 1,112 | 1,050 | 136 |
| The Nilgiris .. .. | 12 3 0 | 2,213 | 64 4 0 | 5,025<br>‡ — 25 | 59 | 480 | 175 | 212 |
| Kollegal .. .. .. | 2 0 0 | 716 | 69 0 0 | 2,186 | 1,063 | 782<br>† 488 | 166 | 78 |
| Coimbatore, North .. | 6 0 0 | 1,604 | 103 0 0 | 6,788 | 2,744 | 1,070<br>† 391<br>‡ + 75 | 409 | 97 |
| Do. Central .. | 5 0 0 | 1,070 | 22 6 0 | 5,015 | 2,622 | 2,014<br>† 197 | .. | 141 |
| Do. South .. | 1 2 0 | 4,134 | 23 0 0 | 2,833<br>† 365<br>— 6 | 84 | 1,759<br>† 395<br>254 | 472 | 76 |
| Direction .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Forest Engineer .. .. | .. | (a) 3,605<br>‡ — 297 | .. | .. | (a) 1,024 | .. | .. | .. |
| Total .. | 61 2 0 | 17,282 | 490 4 0 | 27,498 | 16,003 | 10,543 | 2,911 | 912 |
| Grand total, Presidency .. | 186 5 1 | 81,778 | 1,469 1 5 | 64,956 | 74,886 | 58,951 | 7,377 | 3,089 |

(a) Cost of Establishment. (b) Cost of acquiring sites for buildings. (c) Cost of alignment of roads.
(h) Excludes Rs. 94 spent on repairs in the Parlakimedi Maliahs.
(a) Includes 6 miles where alignment alone has been done. (b) Cost of establishment.
(c) Added or subtracted to tally with audited figures.
(d) Land cess in the Pachamalai and Kollimalai hill villages contributed by the Taluk and District Boards of the Trichinopoly and Salem districts for the maintenance of bridle-paths on these hills.
(e) Length of an inspection path in class II reserves.
(f) Includes Rs. 511 spent on investigation of the proposed Komattiyur-Patrakad road for a distance of 10¾ miles.
(g) Cost of opening ceremony of the Gillman road.
* Cash recovery of service payments. † Pay of temporary establishment.
‡ Variations between the District Forest Officer's and Accountant-General's audited figures.
(a) Expenditure on the construction of quarters for overseer and suboverseer at Sethumadai, South Coimbatore district.

## ANNUAL FORM No. 71.

*Forest Department, Madras Presidency.*

Register of breaches of Forest Rules during 1918–19.

| District. | | Cases pending from 1916-17. | New cases of the year. Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | Total cases. | Disposed of during the year. Convictions. Cases. | Convictions. Persons. | Acquittals. Cases. | Acquittals. Persons. | Total. Cases. | Total. Persons. | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Northern Circle.* | | | | | | | | | | | | | | | |
| Ganjam .. | A .. | (a) 62 (b) + 2 | .. | 109 | 11 | 52 | 172 | 236 | 115 | 381 | 17 | 66 | 132 | 447 | 104 |
| | B .. | (a) 98 | 5 | 293 | 21 | 7 | 326 | 424 | 256 | 878 | 52 | 181 | 308 | 1,059 | 116 |
| | C .. | .. | 30 | 21 | .. | .. | 51 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | (a) 162 | (d) 35 | (e) 423 | (f) 32 | (g) 59 | h) 549 | (i) 660 | (j) 371 | (k) 1,259 | (l) 69 | (m) 247 | (n) 440 | (o) 1,506 | (p) 220 |
| Vizagapatam. | A .. | 25 | 7 | 138 | 5 | 14 | 164 | 189 | 114 | 381 | 10 | 24 | 124 | 405 | 65 |
| | B .. | 79 | 2 | 269 | 39 | 67 | 377 | 456 | 330 | 644 | 44 | 156 | 374 | 800 | 82 |
| | C .. | .. | 14 | 5 | .. | .. | 19 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 104 | 23 | 412 | 44 | 81 | 560 | 645 | 444 | 1,025 | 54 | 180 | 498 | 1,205 | 147 |
| Godavari, Upper. | A .. | (a) 39 | 1 | 26 | 4 | 7 | 38 | 77 | 45 | 78 | 19 | 55 | 64 | 133 | 13 |
| | B .. | (a) 22 | .. | 79 | 12 | 21 | 112 | 134 | 89 | 153 | 18 | 37 | 107 | 190 | 27 |
| | C .. | .. | 22 | .. | .. | .. | 22 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 61 | 23 | 105 | 16 | 28 | 172 | 211 | 134 | 231 | 37 | 92 | 171 | 323 | 40 |
| Godavari, Lower. | A .. | (a) 15 | .. | 39 | 5 | 14 | 58 | 73 | 31 | 81 | 7 | 13 | 38 | 94 | 35 |
| | B .. | (a) 30 | .. | 271 | 23 | 41 | 335 | 365 | 266 | 491 | 22 | 53 | 288 | 544 | 77 |
| | C .. | .. | 54 | 3 | .. | .. | 57 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 45 | 54 | 313 | 28 | 55 | 450 | 438 | 297 | 572 | 29 | 66 | 326 | 638 | 112 |
| Kistna .. | A .. | (a) 35 | .. | 31 | 11 | 7 | 49 | 84 | 71 | 203 | 3 | 6 | 74 | 209 | 10 |
| | B .. | (a) 40 | .. | 326 | 215 | 29 | 570 | 610 | 390 | 1,000 | 118 | 350 | 508 | 1,350 | 102 |
| | C .. | .. | 7 | 3 | .. | .. | 10 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 75 | 7 | 360 | 226 | 36 | 629 | 694 | 461 | 1,203 | 121 | 356 | 582 | 1,559 | 112 |
| Kurnool, East. | A .. | (a) 8 | 1 | 19 | 20 | 2 | 42 | 50 | 41 | 117 | 1 | 3 | 42 | 120 | 8 |
| | B .. | (a) 18 | .. | 142 | 67 | 6 | 215 | 233 | 142 | 568 | 55 | 122 | 197 | 690 | 36 |
| | C .. | ... | 27 | 7 | .. | .. | 34 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 26 | 28 | 168 | 87 | 8 | 291 | 283 | 183 | 685 | 56 | 125 | 239 | 810 | 44 |
| Kurnool, South. | A .. | 20 | 2 | 70 | 16 | 1 | 89 | 109 | 89 | 268 | 6 | 40 | 95 | 308 | 14 |
| | B .. | 27 | .. | 117 | 72 | 2 | 191 | 218 | 167 | 422 | 16 | 37 | 183 | 459 | 35 |
| | C .. | .. | 51 | 12 | .. | .. | 63 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 47 | 53 | 199 | 88 | 3 | 343 | 327 | 256 | 690 | 22 | 77 | 278 | 767 | 49 |
| Kurnool, West. | A .. | 15 | .. | 110 | 30 | 5 | 145 | 160 | 133 | 491 | 10 | 27 | 143 | 518 | 17 |
| | B .. | 66 | .. | 358 | 103 | 25 | 486 | 552 | 397 | 1,126 | 29 | 150 | 426 | 1,276 | 126 |
| | C .. | .. | 67 | 54 | .. | 2 | 123 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 81 | 67 | 522 | 133 | 32 | 754 | 712 | 530 | 1,617 | 39 | 177 | 569 | 1,794 | 143 |
| Total, Northern Circle. | A .. | 221 | 11 | 542 | 102 | 102 | 757 | 978 | 639 | 2,000 | 73 | 234 | 712 | 2,234 | 266 |
| | B .. | 380 | 7 | 1,855 | 552 | 198 | 2,612 | 2,992 | 2,037 | 5,282 | 354 | 1,086 | 2,391 | 6,368 | 601 |
| | C .. | .. | 272 | 105 | .. | 2 | 379 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Northern Circle. | | 601 | 290 | 2,502 | 654 | 302 | 3,748 | 3,970 | 2,676 | 7,282 | 427 | 1,320 | 3,103 | 8,602 | 867 |

A = Cases taken to Court. B = Cases compounded. C = Cases undetected.

(a) The variations between the closing balance of last year and these figures are due to transfers from B to A.
(b) Cases relating to unreserved lands omitted from the previous year's return.
(c) Excludes 88 cases belonging to the Parlakimedi Maliahs.
(d) Do. 4 do. do.
(e) Do. 176 do. do.
(f) Do. 11 do. do.
(g) Do. 71 do. do.
(h) Do. 262 do. do.
(i) Do. 350 do. do.
(j) Do. 178 compounded cases and 44 convicted cases.
(k) Do. 399 persons involved in the compounded cases and 122 persons involved in the cases convicted.
(l) Do. 62 cases withdrawn by the Special Officer and 6 cases acquitted by the Court.
(m) Do. 121 persons involved in the withdrawn cases.
(n) Do. 74 do. acquitted cases.
(o) Do. 716 do. involved in the cases belonging to Parlakimedi Maliahs.
(p) Do. 60 pending cases belonging to Parlakimedi Maliahs.

## Register of breaches of Forest Rules during 1918–19—*cont.*

| District. | | Cases pending from 1917–18. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Central Circle.* | | | | | | | | | | | | | | | |
| Bellary .. | A .. | 13 | .. | 212 | 134 | 6 | 352 | 365 | 174 | 756 | 37 | 40 | 211 | 796 | 154 |
| | B .. | 108 | 1 | 275 | 277 | 43 | 596 | 704 | 456 | 1,268 | 74 | 376 | 530 | 1,644 | 174 |
| | C .. | .. | .. | 7 | | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 121 | 1 | 494 | 411 | 49 | 955 | 1,069 | 630 | 2,024 | 111 | 416 | 741 | 2,440 | 328 |
| Anantapur. | A .. | 153 | .. | 194 | 96 | 18 | 308 | 461 | 289 | 853 | 30 | 113 | 319 | 966 | 142 |
| | B .. | 29 | .. | 283 | 262 | 3 | 548 | 577 | 440 | 998 | 62 | 197 | 502 | 1,195 | 75 |
| | C .. | .. | 37 | 37 | .. | .. | 74 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 182 | 37 | 514 | 358 | 21 | 930 | 1,038 | 729 | 1,851 | 92 | 310 | 821 | 2,161 | 217 |
| Guntur .. | A .. | 116 | .. | 440 | 326 | 5 | 771 | 887 | 642 | 2,089 | 9 | 59 | 651 | 2,148 | 236 |
| | B .. | 263 | .. | 811 | 664 | 17 | 1,492 | 1,755 | 1,309 | 3,494 | 74 | 206 | 1,383 | 3,700 | 372 |
| | C .. | .. | .. | 7 | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 379 | .. | 1,258 | 990 | 22 | 2,270 | 2,642 | 1,951 | 5,583 | 83 | 265 | 2,034 | 5,848 | 608 |
| Cuddapah, North. | A .. | (*a*) 7 | 2 | 65 | 14 | 2 | 83 | 90 | 72 | 279 | 10 | 46 | 82 | 325 | 8 |
| | B .. | (*a*) 51 | .. | 233 | 67 | 26 | 326 | 377 | 265 | 675 | 19 | 46 | 284 | 721 | 93 |
| | C .. | .. | .. | 42 | .. | .. | 42 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 58 | 2 | 340 | 81 | 28 | 451 | 467 | 337 | 954 | 29 | 92 | 366 | 1,046 | 101 |
| Cuddapah, South. | A .. | (*a*) 9 | 1 | 36 | 11 | 1 | 49 | 58 | 50 | 119 | .. | .. | 50 | 119 | 8 |
| | B .. | (*a*) 17 | .. | 101 | 56 | 1 | 158 | 175 | 132 | 324 | 20 | 37 | 152 | 361 | 23 |
| | C .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 26 | 1 | 137 | 67 | 2 | 207 | 233 | 182 | 443 | 20 | 37 | 202 | 480 | 31 |
| Cuddapah, West. | A .. | 109 | 1 | 97 | 52 | 21 | 171 | 280 | 127 | 357 | 28 | 87 | 155 | 444 | 125 |
| | B .. | 112 | 4 | 243 | 132 | 52 | 431 | 543 | 393 | 897 | 83 | 267 | 476 | 1,164 | 67 |
| | C .. | .. | .. | 9 | 2 | 7 | 18 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 221 | 5 | 349 | 186 | 80 | 620 | 823 | 520 | 1,254 | 111 | 354 | 631 | 1,608 | 192 |
| Nellore .. | A .. | 59 | .. | 177 | 392 | 13 | 582 | 641 | 333 | 1,052 | 15 | 66 | 348 | 1,118 | 293 |
| | B .. | 223 | .. | 402 | 317 | 8 | 727 | 950 | 499 | 1,064 | 30 | 88 | 529 | 1,152 | 421 |
| | C .. | .. | 12 | 26 | 18 | 1 | 57 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 282 | 12 | 605 | 727 | 22 | 1,366 | 1,591 | 832 | 2,116 | 45 | 154 | 877 | 2,270 | 714 |
| Chinglepput. | A .. | 76 | .. | 58 | 49 | .. | 107 | 183 | 145 | 361 | 16 | 56 | 161 | 417 | 22 |
| | B .. | 35 | .. | 140 | 176 | .. | 316 | 351 | 266 | 762 | 43 | 60 | 309 | 822 | 42 |
| | C .. | .. | 1 | 2 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 111 | 1 | 200 | 225 | .. | 426 | 4 | 411 | 1,123 | 59 | 116 | 470 | 1,239 | 64 |
| Chittoor .. | A .. | 33 | .. | 173 | 142 | 20 | 335 | 368 | 300 | 606 | 27 | 105 | 327 | 711 | 41 |
| | B .. | 45 | .. | 633 | 372 | 37 | 1,042 | 1,087 | 891 | 1,558 | 71 | 171 | 962 | 1,729 | 125 |
| | C .. | .. | 47 | 5 | 8 | .. | 60 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | | 78 | 47 | 811 | 522 | 57 | 1,437 | 1,455 | 1,191 | 2,164 | 98 | 276 | 1,289 | 2,440 | 166 |
| Total, Central Circle. | A .. | 575 | 4 | 1,452 | 1,216 | 86 | 2,758 | 3,333 | 2,132 | 6,472 | 172 | 572 | 2,304 | 7,044 | 1,029 |
| | B .. | 883 | 5 | 3,121 | 2,323 | 187 | 5,636 | 6,519 | 4,651 | 11,040 | 476 | 1,448 | 5,127 | 12,488 | 1,392 |
| | C .. | .. | 97 | 135 | 28 | 8 | 268 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand Total, Central Circle. | | 1,458 | 106 | 4,708 | 3,567 | 281 | 8,662 | 9,852 | 6,783 | 17,512 | 648 | 2,020 | 7,431 | 19,532 | 2,421 |

A = Cases taken into Court. B = Cases compounded by the District Forest Officer. C = Cases undetected.

(*a*) Variations between the closing balance of 1917–18 and the opening balance of 1918–19 are due to transfer of cases between A and B.

(*b*) Difference between the closing balance of 1917–18 and opening balance of 1918–19 is due to the exclusion of 10 cases transferred to West Cuddapah district

## Register of breaches of Forest Rules during 1918-19—*contd.*

| District. | | Cases pending from 1917-1918. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Southern Circle.* | | | | | | | | | | | | | | | |
| North Vellore. | A .. | 102 | .. | 91 | 72 | .. | 163 | 265 | 197 | 495 | (a) 5 | 22 | 202 | 517 | 63 |
| | B .. | 154 | .. | 612 | 303 | 10 | 925 | 1,079 | 700 | 1,250 | (a) 43 | 87 | 743 | 1,337 | 336 |
| | C .. | .. | 42 | .. | 32 | .. | 74 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 256 | 42 | 703 | 407 | 10 | 1,162 | 1,344 | 897 | 1,745 | (a) 48 | 109 | 945 | 1,854 | 399 |
| South Vellore. | A .. | 95 | 2 | 97 | 24 | 7 | 130 | 225 | 200 | 550 | 9 | 13 | 209 | 563 | 16 |
| | B .. | 136 | .. | 346 | 188 | 9 | 543 | 679 | 452 | 989 | (a) 42 | 77 | 494 | 1,066 | 185 |
| | C .. | .. | 50 | .. | .. | .. | 50 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 231 | 52 | 443 | 212 | 16 | 723 | 904 | 652 | 1,539 | 9 / (a) 42 | 13 / 77 | 703 | 1,629 | 201 |
| West Vellore. | A .. | 70 | .. | 139 | 15 | 8 | 162 | 232 | 104 | 314 | 3 | 4 | 112 | 336 | 120 |
| | B .. | 29 | .. | 222 | 71 | 5 | 298 | 327 | 280 | 623 | (a) 5 | 18 | 292 | 649 | 35 |
| | C .. | .. | 44 | 5 | .. | 2 | 51 | .. | .. | .. | (a) 12 | 26 | .. | .. | .. |
| Total | .. | 99 | 44 | 366 | 86 | 15 | 511 | 559 | 384 | 937 | 3 / (a) 17 | 4 / 44 | 404 | 985 | 155 |
| South Arcot. | A .. | 215 | 1 | 437 | 59 | 8 | 505 | 720 | 533 | 1,264 | 29 | 115 | 577 | 1,433 | 143 |
| | B .. | 490 | .. | 1,142 | 68 | 9 | 1,219 | 1,709 | 1,242 | 1,939 | (a) 15 | 54 | 1,273 | 2,004 | 436 |
| | C .. | .. | 4 | 29 | .. | .. | 33 | .. | .. | .. | (a) 31 | 65 | .. | .. | .. |
| Total | .. | 705 | (b) 5 | 1,608 | 127 | 17 | 1,757 | 2,429 | 1,775 | 8,203 | 29 / (a) 46 | 115 / 119 | 1,850 | 3,437 | 579 |
| North Salem. | A .. | 24 | 1 | 355 | 44 | 14 | 414 | 438 | 384 | 1,538 | 9 | 38 | 393 | 1,576 | 45 |
| | B .. | 254 | 2 | 852 | 162 | 42 | 1,058 | 1,312 | 857 | 1,507 | (a) 110 | 178 | 967 | 1,685 | 345 |
| | C .. | .. | 28 | .. | .. | .. | 28 | .. | .. | .. | | | .. | .. | .. |
| Total | .. | 278 | 31 | 1,207 | 206 | 56 | 1,500 | 1,750 | 1,241 | 3,045 | 9 / (a) 110 | 38 / 178 | 1,360 | 3,261 | 390 |
| South Salem. | A .. | 109 | .. | 176 | 62 | 21 | 259 | 368 | 229 | 757 | 22 | 29 | 270 | 820 | 98 |
| | B .. | 197 | .. | 566 | 139 | 51 | 756 | 953 | 509 | 884 | (a) 19 / (a) 75 | 34 / 169 | 584 | 1,053 | 369 |
| | C .. | .. | 55 | 8 | 2 | 1 | 65 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 306 | 55 | 750 | 203 | 73 | 1,080 | 1,321 | 738 | 1,641 | 22 / (a) 94 | 29 / 203 | 854 | 1,873 | 467 |
| Trichinopoly. | A .. | 279 | .. | 364 | 122 | 1 | 487 | 766 | 557 | 1,480 | 19 / (a) 13 | 120 / 25 | 589 | 1,625 | 177 |
| | B .. | 138 | .. | 889 | 178 | 32 | 1,099 | 1,237 | 871 | 1,494 | .. | .. | 871 | 1,494 | 366 |
| | C .. | 8 | 19 | 18 | 10 | 1 | 48 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 425 | 19 | 1,271 | 310 | 34 | 1,634 | 2,003 | 1,428 | 2,974 | 19 / (a) 13 | 120 / 25 | 1,460 | 3,119 | 543 |
| Madura .. | A .. | 470 | 3 | 613 | 114 | 22 | 752 | 1,222 | 664 | 3,015 | 30 | 98 | 733 | 3,234 | 489 |
| | B .. | 152 | 1 | 479 | 185 | 12 | 677 | 830 | 545 | 1,169 | (a) 39 / (a) 66 | 121 / 267 | 611 | 1,436 | 219 |
| | C .. | .. | 83 | 20 | .. | 1 | 104 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 623 | 87 | 1,112 | 299 | 35 | 1,533 | 2,052 | 1,209 | 4,184 | 30 / (a) 105 | 98 / 388 | 1,344 | 4,670 | 708 |
| Tinnevelly. | A .. | 64 | 1 | 118 | 59 | 2 | 180 | 244 | 194 | 465 | 2 | 5 | 196 | 470 | 48 |
| | B .. | 65 | .. | 248 | 276 | 8 | 532 | 597 | 483 | 1,097 | .. / (a) 69 | .. / 159 | 552 | 1,256 | 45 |
| | C .. | .. | 44 | 1 | .. | .. | 45 | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 129 | 45 | 367 | 335 | 10 | 757 | 841 | 677 | 1,562 | 2 / (a) 69 | 5 / 159 | 748 | 1,726 | 93 |
| Total, Southern Circle. | A .. | 1,428 | 8 | 2,390 | 571 | 85 | 3,052 | 4,480 | 3,062 | 9,878 | 219 | 696 | 3,281 | 10,574 | 1,199 |
| | B .. | 1,616 | 3 | 5,356 | 1,570 | 178 | 7,107 | 8,723 | 5,939 | 10,952 | .. / 448 | .. / 1,028 | 6,387 | 11,980 | 2,336 |
| | C .. | 8 | 369 | 81 | 44 | 5 | 499 | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand total | .. | 3,052 | 380 | 7,827 | 2,185 | 266 | 10,658 | 13,203 | 9,001 | 20,830 | 667 | 1,724 | 9,668 | 22,554 | 3,535 |

A = Cases taken to court. B = Cases compounded. C = Cases undetected.

The difference between column 2 and the closing balance of last year in the districts of North, South and West Vellore, South Arcot, South Salem and Madura is due to transfer of cases between A and B; in Trichinopoly 129 cases were transferred from B to A and 8 undetected cases were wrongly shown under compounded cases of last year; in Tinnevelly the District Forest Officer has not furnished figures for unreserved lands.

(a) Inserted in the Chief Conservator's Office.

## Register of breaches of Forest Rules during 1918–19—*cont.*

| District. | | Cases pending from 1917–18. | New cases of the year. | | | | | Total cases. | Disposed of during the year. | | | | | | Cases pending at close of the year. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Injury to forest by fire. | Unauthorized felling. | Unauthorized grazing. | Other offences. | Total new cases of the year. | | Convictions. | | Acquittals. | | Total. | | |
| | | | | | | | | | Cases. | Persons. | Cases. | Persons. | Cases. | Persons. | |
| *Western Circle.* | | | | | | | | | | | | | | | |
| Mangalore, North. | A .. | * 23 | 3 | 38 | 7 | 31 | 79 | 102 | 67 | 105 | 14 | 28 | 81 | 133 | 21 |
| | B .. | * 41 | 18 | 381 | 65 | 44 | 508 | 549 | 365 | 709 | 65 | 113 | 430 | 822 | 119 |
| | C .. | .. | 48 | .. | .. | .. | 48 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 64 | 69 | 419 | 72 | 75 | 635 | 651 | 432 | 814 | 79 | 141 | 511 | 955 | 140 |
| Mangalore, South. | A .. | 11 | 6 | 47 | 15 | 13 | 81 | 92 | 67 | 109 | 9 | 21 | 76 | 130 | 16 |
| | B .. | 81 | 24 | 272 | 44 | 29 | 369 | 450 | 333 | 503 | 40 | 92 | 373 | 595 | 77 |
| | C .. | .. | 20 | .. | .. | .. | 20 | .. | .. | .. | .. | .. | .. | .. | . |
| | Total .. | 92 | 50 | 319 | 59 | 42 | 470 | 542 | 400 | 612 | 49 | 113 | 449 | 725 | 93 |
| Malabar, North. | A .. | | .. | 2 | .. | 1 | 3 | 3 | 1 | 1 | .. | .. | 1 | 1 | 2 |
| | B .. | 1 | 1 | 8 | 2 | 8 | 19 | 20 | 16 | 35 | 3 | 18 | 19 | 53 | 1 |
| | C .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 1 | 1 | 10 | 2 | 9 | 22 | 23 | 17 | 36 | 3 | 18 | 20 | 54 | 3 |
| Malabar, South. | A .. | * 2 | .. | 1 | .. | 4 | 5 | 7 | 7 | 21 | .. | .. | 7 | 21 | .. |
| | B .. | * 13 | .. | 2 | 112 | 34 | 148 | 161 | 71 | 144 | 5 | 22 | 76 | 166 | 85 |
| | C .. | .. | 7 | .. | .. | .. | 7 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 15 | 7 | 3 | 112 | 38 | 160 | 168 | 78 | 165 | 5 | 22 | 83 | 187 | 85 |
| The Nilgiris. | A .. | * 43 | 4 | 27 | 21 | 11 | 63 | 106 | 96 | 215 | 4 | 8 | 100 | 223 | 6 |
| | B .. | * 15 | 5 | 64 | 51 | 24 | 144 | 159 | 97 | 184 | 34 | 74 | 131 | 258 | 28 |
| | C .. | .. | 39 | .. | .. | .. | 39 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 58 | 48 | 91 | 72 | 35 | 246 | 265 | 193 | 399 | 38 | 82 | 231 | 481 | 34 |
| Kollegal. | A .. | 2 | 1 | 30 | 19 | 1 | 51 | 53 | 42 | 107 | 2 | 6 | 44 | 113 | 9 |
| | B .. | 13 | .. | 83 | 61 | 4 | 148 | 161 | 93 | 219 | 25 | 60 | 118 | 279 | 43 |
| | C .. | .. | 19 | .. | .. | .. | 19 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 15 | 20 | 113 | 80 | 5 | 218 | 214 | 135 | 326 | 27 | 66 | 162 | 392 | 52 |
| Coimbatore, North. | A . | * 45 | .. | 61 | 18 | 6 | 85 | 130 | 106 | 313 | 10 | 27 | 116 | 340 | 14 |
| | B .. | 53 | 5 | 221 | 192 | 9 | 427 | 480 | 376 | 1,437 | 41 | 136 | 417 | 1,573 | 63 |
| | C .. | .. | 32 | 6 | 4 | .. | 42 | .. | . | .. | .. | .. | .. | .. | .. |
| | Total .. | 98 | 37 | 288 | 214 | 15 | 554 | 610 | 482 | 1,750 | 51 | 163 | 533 | 1,913 | 77 |
| Coimbatore, Central. | A .. | 32 | .. | 32 | 38 | 31 | 101 | 133 | 84 | 281 | 9 | 40 | 93 | 321 | 40 |
| | B .. | 49 | .. | 208 | 79 | 74 | 361 | 410 | 352 | 677 | 19 | 49 | 371 | 726 | 39 |
| | C .. | .. | 16 | 1 | 2 | 2 | 21 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 81 | 16 | 241 | 119 | 107 | 483 | 543 | 436 | 958 | 28 | 89 | 464 | 1,047 | 79 |
| Coimbatore, South. | A .. | * 9 | .. | 44 | 3 | 6 | 53 | 62 | 49 | 101 | 3 | 13 | 52 | 114 | 10 |
| | B .. | * 29 | .. | 205 | 30 | 11 | 246 | 275 | 211 | 429 | 19 | 82 | 230 | 511 | 45 |
| | C .. | .. | 5 | .. | .. | .. | 5 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 38 | 5 | 249 | 33 | 17 | 304 | 337 | 260 | 530 | 22 | 95 | 282 | 625 | 55 |
| Grand, Total. | A .. | 167 | 14 | 282 | 121 | 104 | 521 | 688 | 519 | 1,253 | 51 | 143 | 570 | 1,396 | 118 |
| | B .. | 295 | 53 | 1,444 | 636 | 237 | 2,370 | 2665 | 1,914 | 4,337 | 251 | 646 | 2,165 | 4,983 | 500 |
| | C .. | .. | 186 | 7 | 6 | 2 | 201 | .. | .. | .. | .. | .. | .. | .. | .. |
| | Total .. | 462 | 253 | 1,733 | 763 | 343 | 3,092 | 3,353 | 2,433 | 5,590 | 302 | 789 | 2,735 | 6,379 | 618 |
| Total .. | A .. | 2,391 | 37 | 4,666 | 2,010 | 375 | 7,088 | 9,479 | 6,352 | 19,603 | 515 | 1,645 | 6,867 | 21,248 | 2,612 |
| | B .. | 3,174 | 68 | 11,776 | 5,081 | 800 | 17,725 | 20,899 | 14,541 | 31,611 | 1,529 | 4,208 | 16,070 | 35,819 | 4,829 |
| | C .. | .. | 924 | 328 | 78 | 17 | 1,347 | ... | .. | .. | ... | .. | .. | .. | .. |
| Grand Total, Presidency. | | 5,565 | 1,029 | 16,770 | 7,169 | 1,192 | 26,160 | 30,378 | 20,893 | 51,214 | 2,044 | 5,853 | 22,937 | 57,067 | 7,441 |

A = Cases taken into Court. B = Cases compounded. C = Cases undetected.

* The variations between the closing balances of 1917–18 and these figures are due to transfers between heads A and B.

Compounded cases taken to Court for non-payment of compounding fees and convicted.

## Annual Form No. 72.

*Forest Department, Madras Presidency.*

Area of forest tracts protected from fire during 1918–19.

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Northern Circle.* | Acs. | Acs. | Acs. | Acs. | Rs. |
| Ganjam .. | Special protection .. | 83,710 | 84,895 | 1,404 | 83,491 | 3,920 |
| | General do. .. | 215,442 | 181,399 | 4,207 | 177,192 | 1,683 |
| | Total, Ganjam .. | 299,152 | 266,294 | 5,611 | 260,683 | 5,603 |
| Vizagapatam. | Special protection .. | 54,408 | 55,777 | 2,469 | 53,308 | 1,084 |
| | General do. .. | 120,120 | 126,867 | 3,039 | 123,828 | 142 |
| | Total, Vizagapatam .. | 174,528 | 182,644 | 5,508 | 177,136 | 1,226 |
| Gōdāvari, Upper. | Special protection .. | 492,590 | 531,842 | 101,945 | 429,897 | 7,243 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total, Gōdāvari, Upper .. | 492,590 | 531 842 | 101,945 | 429,897 | 7,243 |
| Gōdāvari, Lower. | Special protection .. | 151,440 | 152,636 | 4,453 | 148,183 | 4,636 |
| | General do. .. | 82,739 | 82,929 | 472 | 82,457 | 860 |
| | Total, Gōdāvari, Lower .. | 234,179 | 235,565 | 4,926 | 230,640 | 5,496 |
| Kistna .. | Special protection .. | 14,159 | 13,809 | 1,165 | 12,644 | 748 |
| | General do. .. | 36,719 | 37,491 | 2,476 | 35,015 | 427 |
| | Total, Kistna .. | 50,878 | 51,300 | 3,641 | 47,659 | 1,175 |
| Kurnool, East. | Special protection .. | 175,665 | 201,516 | 12,110 | 189,406 | 8,065 |
| | General do. .. | 419,562 | 414,239 | 3,459 | 410,780 | 458 |
| | Total, Kurnool, East .. | 595,227 | 615,755 | 15,569 | 600,186 | 8,523 |
| Kurnool, South. | Special protection .. | 255,891 | 354,660 | 81,204 | 273,456 | 10,290 |
| | General do. .. | *126,710 | 132,004 | 5,612 | 126,392 | .. |
| | Total, Kurnool, South .. | 382,601 | 486,664 | 86,816 | 399,848 | 10,290 |
| Kurnool, West. | Special protection .. | 71,901 | 123,540 | 51,752 | 71,788 | 7,329 |
| | General do. .. | 331,748 | 426,245 | 49,695 | 376,550 | .. |
| | Total, Kurnool, West .. | 403,649 | 549,785 | 101,447 | 448,338 | 7,329 |
| Total .. | Special protection .. | 1,299,764 | 1,518,675 | 256,502 | 1,262,173 | 43,315 |
| | General do. .. | 1,334,040 | 1,401,174 | 68,960 | 1,332,214 | 3,570 |
| | Grand total .. | 2,633,804 | 2,919,849 | 325,462 | 2,594,387 | 46,885 |
| | *Central Circle.* | | | | | |
| Bellary .. | Special protection .. | 39,574 | 18,862 | 300 | 18,562 | 1,334 |
| | General do. .. | 7,258 | 29,664 | 2,662 | 27,002 | .. |
| | Total .. | 46,832 | 48,526 | 2,962 | 45,564 | 1,334 |
| Anantapur .. | Special protection .. | 376,117 | 368,933 | 6,654 | 362,279 | 3,731 |
| | General do. .. | 72,596 | 110,609 | 438 | 110,171 | .. |
| | Total .. | 448,713 | 479,542 | 7,092 | 472,450 | 3,731 |
| Guntūr .. | Special protection .. | .. | .. | .. | .. | .. |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | .. | .. | .. | .. | .. |
| Cuddapah, North. | Special protection .. | 221,342 | 274,932 | 26,385 | 248,547 | 6,853 |
| | General do. .. | 43,393 | 55,086 | 2,437 | 52,649 | .. |
| | Total .. | 264,735 | 330,018 | 28,822 | 301,196 | 6,853 |
| Cuddapah, South. | Special protection .. | 176,300 | 218,072 | 9,584 | 208,488 | 3,143 |
| | General do. .. | 40,129 | 45,231 | 3,697 | 41,534 | .. |
| | Total .. | 216,429 | 263,303 | 13,281 | 250,022 | 3,143 |
| Cuddapah, West. | Special protection .. | 202,350 | 238,674 | 5,225 | 233,449 | 4,243 |
| | General do. .. | 70,413 | 115,006 | 7,190 | 107,816 | 961 |
| | Total .. | 272,763 | 353,680 | 12,415 | 341,265 | 5,204 |

* Revised figures furnished by the District Forest Officer.

(*a*) Excludes 127,665 acres belonging to Parlakimedi Maliahs.
(*b*) Do. 128,053 acres do. do.
(*c*) Do. 220 acres do. do.
(*d*) Do. 127,833 acres do. do.
(*e*) Do. 594 rupees being cost of fire protection in Parlakimedi Maliahs.
(*f*) Erroneously debited to A-VIII (G) in the audited figures.
(*g*) Includes the area notified under the 'India' Forest Act.
(*h*) Cash recovery of service payments.

Area of forest tracts protected from fire during 1918-19—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Central Circle*—cont. | ACS. | ACS. | ACS. | ACS. | RS. |
| Nellore .. | Special protection .. | 131,556 | 149,183 | 1,142 | 148,041 | 1,428 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 131,556 | 149,183 | 1,142 | 148,041 | 1,428 |
| Chinglepat.. | Special protection .. | 25,510 | 25,523 | 90 | 25,433 | 1,637 |
| | General do. .. | 106,695 | 106,695 | .. | 106,695 | .. |
| | Total .. | 132,205 | 132,218 | 90 | 132,128 | 1,637 |
| Chittoor .. | Special protection .. | 151,748 | 161,963 | 2,512 | 159,451 | 1,323 |
| | General do. .. | 363,971 | 367,587 | 435 | 367,152 | .. |
| | Total .. | 515,719 | 529,550 | 2,947 | 526,603 | 1,323 |
| Total .. | Special protection .. | 1,324,497 | 1,456,142 | 51,892 | 1,404,250 | 23,692 |
| | General do. .. | 704,455 | 829,878 | 16,859 | 813,019 | 961 |
| | Total .. | 2,028,952 | 2,286,020 | 68,751 | 2,217,269 | 24,653 |
| | *Southern Circle.* | | | | | |
| Vellore, North. | Special protection .. | 43,913 | 39,558 | 290 | 39,268 | 850 |
| | General do. .. | 238,963 | 255,317 | 2,808 | 252,509 | .. |
| | Total .. | 282,876 | 294,875 | 3,098 | 291,777 | 850 |
| Vellore, South. | Special protection .. | 100,077 | 100,998 | 552 | 100,446 | 861 |
| | General do. .. | 140,256 | 151,227 | 1,994 | 149,233 | .. |
| | Total .. | 240,333 | 252,225 | 2,546 | 249,679 | 861 |
| Vellore, West. | Special protection .. | 98,959 | 101,535 | 8,191 | 93,344 | 768 |
| | General do. .. | 101,591 | 108,418 | 646 | 107,772 | .. |
| | Total .. | 200,550 | 209,953 | 8,837 | 201,116 | 768 |
| South Arcot. | Special protection .. | 13,540 | 13,541 | 5 | 13,536 | 207 |
| | General do. .. | 194,558 | 166,360 | 33 | 166,327 | .. |
| | Total .. | 208,098 | 179,901 | 38 | 179,863 | 207 |
| Salem, North. | Special protection .. | 91,752 | 86,434 | 2,267 | 84,167 | 2,894 |
| | General do. .. | 339,101 | 449,673 | 314 | 449,359 | |
| | Total .. | 430,860 | 536,107 | 2,581 | 533,526 | 2,894 |
| Salem, South. | Special protection .. | 239,412 | 274,970 | 1,224 | 273,746 | 2,408 |
| | General do. .. | 106,622 | 78,202 | 191 | 78,011 | .. |
| | Total .. | 346,034 | 353,172 | 1,415 | 351,757 | 2,408 |
| Trichinopoly. | Special protection .. | 99,821 | 97,083 | 429 | 96,654 | 563 |
| | General do. .. | 121,924 | 101,049 | 15 | 101,034 | .. |
| | Total .. | 221,745 | 198,132 | 444 | 197,688 | 563 |
| Madura .. | Special protection .. | 167,383 | 216,778 | 5,740 | 211,038 | 5,245 |
| | General do. .. | 241,813 | 205,575 | 834 | 204,741 | .. |
| | Total .. | 409,196 | 422,353 | 6,574 | 415,779 | 5,245 |
| Tinnevelly. | Special protection .. | 35,374 | 35,688 | 74 | 35,614 | 4,527 |
| | General do. .. | 201,895 | 206,712 | 12,899 | 193,813 | .. |
| | Total .. | 237,269 | 242,400 | 12,973 | 229,427 | 4,527 |
| | Total, Southern Circle, Special protection. | 890,231 | 966,585 | 18,772 | 947,813 | 18,323 |
| | Total, Southern Circle, General protection. | 1,686,730 | 1,722,533 | 19,734 | 1,702,799 | .. |
| | Grand total, Southern Circle (Special and General protection). | 2,576,961 | 2,689,118 | 38,506 | 2,650,612 | 18,323 |

## Area of forest tracts protected from fire during 1918-19—*cont.*

| District. | Forest tracts. | Area protected during the previous year. | During the year under report. | | | Cost during the year under report. |
|---|---|---|---|---|---|---|
| | | | Area attempted to be protected. | Fires. | Actually protected. | |
| | *Western Circle.* | ACS. | ACS. | ACS. | ACS. | RS. |
| Mangalore, North. | Special protection .. | 30,732 | 31,950 | 255 | 31,695 | 854 |
| | General do. .. | 199,276 | 200,014 | 1,061 | 198,953 | 375 * 520 |
| | Total .. | 230,008 | 231,964 | 1,316 | 230,648 | 1,749 |
| Mangalore, South. | Special protection .. | 103,508 | 107,342 | 3,404 | 103,938 | 1,920 |
| | General do. .. | 170,135 | 171,458 | 935 | 170,523 | 156 * 799 |
| | Total .. | 273,643 | 278,800 | 4,339 | 274,461 | 2,875 |
| Malabar, North. | Special protection .. | 134,823 | 139,596 | 974 | 138,622 | 5,899 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 134,823 | 139,596 | 974 | 138,622 | 5,899 |
| Malabar, South. | Special protection .. | 104,678 | 104,883 | 856 | 104,027 | 4,637 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 104,678 | 104,883 | 856 | 104,027 | 4,637 |
| The Nilgiris. | Special protection .. | 64,875 | 76,657 | 2,503 | 74,154 | 4,152 |
| | General do. .. | .. | .. | .. | .. | .. |
| | Total .. | 64,875 | 76,657 | 2,503 | 74,154 | 4,152 |
| Kollegal .. | Special protection .. | 30,267 | 38,380 | 1,986 | 36,394 | 2,892 |
| | General do. .. | 311,841 | 425,613 | 7,016 | 418,597 | .. |
| | Total .. | 342,108 | 463,993 | 9,002 | 454,991 | 2,892 |
| Coimbatore, North. | Special protection .. | 8,280 | 10,461 | 2,588 | 7,873 | 1,208 |
| | General do. .. | 435,767 | 576,243 | 17,135 | 559,108 | 134 |
| | Total .. | 444,047 | 586,704 | 19,723 | 566,981 | 1,342 |
| Coimbatore, Central. | Special protection .. | 93,841 | 115,048 | 845 | 114,203 | 5,517 |
| | General do. .. | 135,612 | 116,721 | 194 | 116,527 | 722 |
| | Total .. | 229,453 | 231,769 | 1,039 | 230,730 | 6,239 |
| Coimbatore, South. | Special protection .. | 46,797 | 47,350 | 1 | 47,349 | 2,595 |
| | General do. .. | 180,305 | 180,663 | 754 | 179,909 | .. |
| | Total .. | 227,102 | 228,013 | 755 | 227,258 | 2,595 |
| | Total, Special, Western Circle. | 617,801 | 671,667 | 13,412 | 658,255 | 30,205 |
| | Total, General, Western Circle. | 1,432,936 | 1,670,712 | 27,095 | 1,643,617 | 2,175 |
| | Grand total, Western Circle. | 2,050,737 | 2,342,379 | 40,507 | 2,301,872 | 32,380 |
| | Grand total, Presidency Special protection. | 4,132,293 | 4,613,069 | 340,578 | 4,272,491 | 1,15,535 |
| | Grand total, Presidency General protection. | 5,158,161 | 5,624,297 | 132,648 | 5,491,649 | 6,706 |
| | Grand total, Presidency .. | 9,290,454 | 10,237,366 | 473,226 | 9,764,140 | 1,22,241 |

* Fire-tracing Mysore-South Kanara boundary.

## Annual Form No. 73.

*Forest Department, Madras Presidency.*

Area closed and open to grazing during 1918–19.

| District. | Closed to all animals. | | Open to grazing | | | |
|---|---|---|---|---|---|---|
| | | | Of all animals. | | Of all animals except browsers (sheep and goats). | |
| | Whole year. | Part of year. | Whole year. | Part of year. | Whole year. | Part of year. |
| **Northern Circle.** | | | | | | |
| *Reserved forests.* | Sq. mls. | Sq. mls. | Sq. mls. | Sq. mls. | Sq. mls. | Sq. mls. |
| Ganjām | 83 | .. | 540 | .. | .. | .. |
| Vizagapatam | 11 | .. | 299 | .. | 2 | .. |
| Gōdāvari, Upper | .. | .. | 435 | .. | .. | .. |
| Do. Lower | 25 | .. | 373 | .. | .. | .. |
| Kistna | 90 | 8 | 166 | .. | .. | .. |
| Kurnool, East | .. | 312 | 658 | .. | .. | .. |
| Do. South | 554 | .. | 206 | .. | .. | .. |
| Do. West | 223 | .. | 636 | .. | .. | .. |
| Total | (c)986 | 320 | 3,313 | .. | (d)2 | .. |
| *Reserved lands.* | | | | | | |
| Ganjām | .. | .. | 2 | .. | .. | .. |
| Vizagapatam | .. | .. | (a) 2 | .. | .. | .. |
| Gōdāvari, Upper | .. | .. | 399 | .. | .. | .. |
| Do. Lower | .. | .. | 87 | .. | .. | .. |
| Kistna | .. | .. | 1 | .. | .. | .. |
| Kurnool, East | .. | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. | .. |
| Do. West | .. | .. | .. | .. | .. | .. |
| Total | .. | .. | 491 | .. | .. | .. |
| **Central Circle.** | | | | | | |
| *Reserved forests.* | | | | | | |
| Bellary | 94 | 24 | 483 | 24 | .. | .. |
| Anantapur | 160 | .. | 589 | .. | .. | .. |
| Guntūr | 91 | .. | .. | 715 | .. | .. |
| Cuddapah, North | 70 | .. | 525 | .. | .. | .. |
| Do. South | 94 | .. | 368 | .. | .. | .. |
| Do. West | 58 | .. | 689 | .. | .. | .. |
| Nellore | 255 | 440 | 25 | 440 | .. | .. |
| Chingleput | 59 | 133 | 15 | 133 | .. | .. |
| Chittoor | 147 | .. | 680 | .. | .. | .. |
| Total | 1,028 | 597 | 3,374 | 1,312 | .. | .. |
| *Reserved lands.* | | | | | | |
| Bellary | 3 | .. | .. | .. | .. | .. |
| Anantapur | .. | .. | .. | .. | .. | .. |
| Guntur | .. | .. | .. | .. | .. | .. |
| Cuddapah, North | 1 | .. | .. | .. | .. | .. |
| Do. South | .. | .. | .. | .. | .. | .. |
| Do. West | 5 | .. | .. | .. | .. | .. |
| Nellore | 11 | .. | .. | .. | .. | .. |
| Chingleput | .. | .. | .. | .. | .. | .. |
| Chittoor | .. | .. | .. | .. | .. | .. |
| Total | 20 | .. | .. | .. | .. | .. |
| **Southern Circle.** | | | | | | |
| *N.B.*—No goat browsing is allowed. | | | | | | |
| *Reserved forests.* | | | | | | |
| Vellore, North | 89 | .. | 372 | .. | .. | .. |
| Do. South | 59 | .. | 359 | .. | .. | .. |
| Do. West | 11 | .. | 317 | .. | .. | .. |
| South Arcot | 83 | .. | 196 | .. | .. | .. |
| Salem, North | 79 | .. | 720 | .. | .. | .. |
| Do. South | 56 | 13 | 485 | .. | .. | .. |
| Trichinopoly | 206 | .. | 103 | .. | .. | .. |
| Madura | 83 | .. | 577 | .. | .. | .. |
| Tinnevelly | 266 | 81 | 78 | .. | .. | .. |
| Total | 932 | 94 | 3,209 | .. | .. | .. |
| *Reserved lands.* | | | | | | |
| Vellore, North | 2 | .. | .. | .. | .. | .. |
| Do. West | .. | .. | (b) | .. | .. | .. |
| Salem, North | .. | .. | 38 | .. | .. | .. |
| Do. South | 6 | .. | 18 | .. | .. | .. |
| Tinnevelly | .. | .. | 2 | .. | .. | .. |
| Total | 8 | .. | 58 | .. | .. | .. |

(a) Leased forests.
(b) Below one square mile.
(c) Excludes 6 square miles belonging to the Parlakimedi Maliahs.
(d) Do. 194 square miles do.

## Areas closed and open to grazing during 1918-19—*cont.*

| District. | Closed to all animals. | | Open to grazing | | | |
|---|---|---|---|---|---|---|
| | | | Of all animals. | | Of all animals except (browsers sheep and goats). | |
| | Whole year. | Part of year. | Whole year. | Part of year. | Whole year. | Part of year. |
| **WESTERN CIRCLE.** | | | | | | |
| *Reserved forests.* | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | SQ. MLS. | |
| Mangalore, North | 7 | * | 355 | .. | .. | .. |
| Do. South | 3 | .. | 433 | .. | .. | .. |
| Malabar, North | 57 | .. | .. | .. | 206 | .. |
| Do. South | 144 | .. | .. | .. | .. | .. |
| The Nilgiris | 23 | .. | 442 | .. | .. | .. |
| Kollegal | 82 | .. | 649 | .. | .. | .. |
| Coimbatore, North | 38 | .. | 879 | .. | .. | .. |
| Do. Central | 132 | 2 | 228 | .. | .. | .. |
| Do. South | 249 | .. | 191 | .. | 14 | .. |
| Total | 735 | 2 | 3,177 | .. | 220 | .. |
| *Reserved lands.* | | | | | | |
| Malabar, South | 20 | .. | .. | .. | .. | .. |
| The Nilgiris | 9 | .. | 75 | .. | .. | .. |
| Coimbatore, North | .. | .. | * | .. | .. | .. |
| Do. Central | .. | * | .. | .. | .. | .. |
| Total | 29 | .. | 75 | .. | .. | .. |
| Grand Total, Presidency | 8,738 | 1,013 | 13,697 | 1,812 | 222 | .. |

*Note.*—Sheep but not goats were allowed to graze over the areas noted in column (4).

* Less than one square mile.

ANNUAL FORM No. 74.

*Forest Department, Madras Presidency.*

Return of grazing in the State forests during 1918-19.

ANNUAL

*Forest Department,*

Return of grazing in the

| Districts. | Grazing on payments | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Goats and Sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| **NORTHERN CIRCLE.** | | | | | Rs. | | | | | Rs. |
| *Reserved forests.* | | | | | | | | | | |
| Ganjām .. .. | .. | .. | .. | .. | .. | 8,235 | 33,922 | S 316 | .. | 9,478 |
| Vizagapatam .. | (a) 155 | (a) 3,048 | (a) S 2,220 | .. | 1,117 | 1,035 | 14,318 | S 310 | .. | 3,102 |
| Godāvari, Upper.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | (a) 4,819 | (a) 3,881 | .. | .. | .. | .. | .. | .. | .. | .. |
| | (b) 1,498 | (c) 497 | .. | .. | 4,875 | .. | .. | .. | .. | . |
| Kistna .. .. | (b) 592 | (b) 5,664 | .. | .. | 4,078 | 4,590 | 20,645 | S 12,360 | .. | 6,751 |
| | .. | (c) 1,221 | (b) S 1,539 | .. | .. | . | .. | .. | .. | ‡ 1,465 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | † 154 |
| | | | | | | | | | | • 1,831 |
| Kurnool, East .. | (c) 1,026 | (c) 12,829 | (a) S 28,345 | .. | 26,176 | 612 | 4,424 | S 14,148 | .. | 2,386 |
| | (a) 3,085 | (a) 28,942 | | | | | | | | • 2 |
| | | | | | | | | | | ‡ 820 |
| Do. South .. | .. | (c) 1,442 | (a) S 6,566 | .. | 4,520 | 2,867 | 14,614 | S 18,620 | .. | 5,561 |
| | (a) 620 | (a) 7,788 | | | | | | | | |
| Do. West .. | (c) 66 | (c) 5,281 | (c) S 76 | .. | 5,385 | 3,762 | 29,942 | S 42,902 | .. | 11,047 |
| | (a) 5,535 | (a) 13,282 | (a) S 12,207 | | | | | | | |
| | (d) 40 | (d) 6,340 | (d) S 680 | .. | 10,984 | .. | .. | .. | .. | • 40 |
| Total .. | 17,436 | 90,215 | S 51,638 | .. | 57,135 | 21,101 | 117,865 | S 88,656 | .. | 38,325 |
| | | | | | | | | | | ‡ 2,285 |
| | | | | | | | | | | • 1,873 |
| | | | | | | | | | | † 154 |
| *Reserved lands.* | | | | | | | | | | |
| Godavari Upper .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Lower .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | • 280 |
| Total .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | | | | | | | | | | • 280 |
| *Unreserved lands.* | | | | | | | | | | |
| Ganjām .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | • 119 |
| Godāvari, Upper.. | (a) 56 | (f) 605 | .. | .. | 217 | .. | .. | .. | .. | .. |
| Do. Lower.. | (a) 4,813 | (a) 4,562 | (a) G 82 | .. | 5,641 | .. | .. | .. | .. | .. |
| | | | (a) S 100 | | | | | | | |
| Kistna .. .. | .. | .. | .. | .. | .. | 1,047 | 236 | S 100 | .. | 446 |
| | | | | | | | | | | • 25 |
| Total .. | 4,869 | 5,167 | G 82 | .. | 5,858 | 1,047 | 236 | S 100 | .. | 446 |
| | | | S 100 | | | | | | | • 144 |
| Grand total .. | (g) 22,305 | (h) 95,382 | S 51,738 | .. | (i) 62,993 | 22,148 | 118,101 | S 88,756 | .. | 38,771 |
| | | | G 82 | | | | | | | ‡ 2,285 |
| | | | | | | | | | | • 2 297 |
| | | | | | | | | | | † 154 |
| **CENTRAL CIRCLE.** | | | | | | | | | | |
| Bellary .. .. | 1,896 | 8,282 | 3,320 | .. | 6,867 | 9,654 | 47,503 | 65,323 | .. | 18,651 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 1,064 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 7,601 |
| Anantapur .. | 3,116 | 59,397 | 54,652 | .. | 46,478 | .. | .. | .. | .. | .. |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 2,471 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 522 |
| Guntūr .. .. | (a) 4,822 | 54,843 | 44,354 | .. | 64,998 | .. | .. | .. | Panchayat fees. | 5,415 |
| | (b) 2,123 | 2,480 | 14,926 | .. | 3,547 | .. | .. | .. | Kancha rent. | 1,203 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 4,734 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 81 |
| Cuddapah, North. | .. | (c) 7,946 | .. | .. | 7,946 | 4,099 | 13,344 | 41,123 | .. | 7,894 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 486 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 7 |
| Do. South. | .. | (f) 1,219 | .. | .. | 1,219 | 530 | 19,545 | 16,867 | .. | 5,445 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 12 |
| Do. West. | .. | (g) 6,590 | .. | .. | 6,590 | 2,668 | 41,403 | 58,799 | .. | 14,276 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 1,102 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 46 |
| Nellore .. .. | 5 | (i) 5 | .. | .. | 10 | 36 | 1,569 | 226 | .. | 434 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 1,269 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Kancha rent. | 85,174 |
| Chingleput .. | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 1,298 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Kancha rent. | 86,706 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 3 |
| | .. | .. | .. | 1 | .. | 2,831 | 87,257 | 46,641 | .. | 21,786 |
| Chittoor .. | .. | .. | .. | .. | .. | .. | .. | .. | Panchayat fees. | 476 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Fodder grass. | 41 |
| | .. | .. | .. | .. | .. | .. | .. | .. | Penning fees. | 7 |
| Total .. | 11,962 | 140,762 | 117,252 | 1 | 1,37,655 | 19,818 | 210,621 | 228,879 | .. | 2,18,204 |

*Notes for N.C.*— G = Goats. S = Sheep. • Sale-proceeds of fodder grass.

† Sale-proceeds of mangrove leaves. ‡ Revenue from forests handed over to panchayat management.

(1) The full rates are 6 annas per buffalo, 3 annas per cow or bullock and 1 anna 6 pies per sheep or goat.

(2) The enhanced or special rates are—(a) 8 annas per buffalo, 4 annas per cow or bullock and 2 annas per sheep or goat.
(b) 12 annas per buffalo, 6 annas per cow or bullock and 3 annas per sheep.
(c) Re. 1 per buffalo, cow or bullock and annas 8 per sheep, 6 annas per cow or bullock.
(d) 12 annas per buffalo, 8 annas per cow or bullock and 4 annas per sheep.

(3) The privileged rates are— (e) 4 annas per buffalo, 2 annas per cow or bullock and 1 anna per sheep.
(f) 5 annas per cow or bullock.
(g) Excludes 1,415 buffaloes belonging to Parlakimedi Maliahs.
(h) Do. 1,740 cows do. do.
(i) Excludes Rs. 857 being fees received in Parlakimedi Maliahs.

FORM No. 74.

*Madras Presidency.*

State forests during 1918-19.

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates. | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Total value of fees at full rates. | Grand total of value at full rates. |
| | | | | Actual. | Value at full rates. | | | | | | | | | | | | |
| (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs. | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 553 | 3,000 | S 225 | .. | 791 | 791 | 10,269 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,007 | .. | .. | 939 | 939 | 5,158 |
| (*e*) 4,127 | (*e*) 18,824 | (*e*) S 6,252 | .. | 3,775 | 5,663 | .. | .. | .. | .. | .. | 4,231 | 42,298 | S 191 | .. | 9,535 | 9,535 | 15,198 |
| (*e*) 1,467 | (*e*) 23,328 | .. | .. | 2,226 | 6,565 | .. | .. | .. | .. | .. | 899 | 7,331 | .. | .. | 2,282 | 2,282 | 13,722 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 10,829<br>‡1,465<br>† 154<br>• 1,881 |
| .. | .. | .. | .. | .. | .. | 647 | 716 | S 102<br>G5,211 | .. | 875 | .. | .. | .. | .. | .. | .. | 89,437<br>• 2<br>‡ 820 |
| .. | .. | .. | .. | .. | .. | 12 | 11 | S 57 | .. | 12 | .. | .. | .. | .. | .. | .. | 10,093 |
| .. | .. | .. | .. | .. | .. | 324 | 290 | S 804 | .. | 251 | .. | .. | .. | .. | .. | .. | 27,667<br>• 40 |
| 5,594 | 42,152 | S 6,252 | .. | 6,001 | 12,228 | 983 | 1017 | S 963<br>G5,211 | .. | 1,138 | 5,683 | 57,636 | S 416 | .. | 13,547 | 13,547 | 1,22,373<br>‡ 2,285<br>† 154<br>• 1,373 |
| (*e*) 3,467 | (*e*) 24,597 | (*e*) S 1,266 | .. | 4,021 | 6,031 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,031 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | • 280 |
| 3,467 | 24,597 | S 1,266 | .. | 4,021 | 6,031 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,031<br>• 280 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | • 119 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 217 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,641 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 446<br>• 25 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,304<br>• 144 |
| 9,061 | 66,749 | S 7,518 | .. | 10,022 | 18,259 | 983 | 1017 | S 963<br>G5,211 | .. | 1,138 | 5,683 | 57,636 | S 416 | .. | 13,547 | 13,547 | 1,34,708<br>‡ 2,285<br>• 2,297<br>† 154 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 34,183 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 49,471 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 79,978 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | (*d*) 24 | .. | .. | 12 | 33 | .. | .. | .. | .. | .. | 190 | 45 | 850 | .. | 159 | 159 | 16,525 |
| .. | (*e*) 150 | .. | .. | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | 691 | .. | .. | 130 | .. | .. | .. | .. | .. | .. | 6,806 |
| .. | (*h*) 328 | .. | .. | 31 | 62 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,076 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 86,887 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 88,022 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | .. | 15 | 15 | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,310 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| .. | 532 | .. | .. | 43 | 95 | .. | 691 | .. | .. | 130 | 190 | 126 | 850 | .. | 174 | 174 | 3,56,258 |

*Notes for O.C.*—(1) The enhanced or special rates are—

Bellary .. Re. 1-0-0 per buffalo, As. 0-8-0 per cow and As. 0-4-0 per sheep.

Anantapur .. Re. 1-0-0 do. do. do.

Guntur .. (*a*) Rs. 1-8-0 per buffalo, As. 12 per cow, and As. 6 per sheep.
(*b*) As. 8 per buffalo, As. 4 per cow and As. 2 per sheep.

Cuddapah, North (*c*) Re. 1 per cow.
(*d*) As. 1-6 per cow.
(*e*) Anna 1 per cow.

Do. South. (*f*) Re. 1 per cow.

Do. West. (*g*) Re. 1 per cow.
(*h*) As. 1-6 per cow.

Nellore .. .. (*i*) Re. 1 per buffalo and Re. 1 per cow.

(2) The full rates are As. 6 per buffalo, As. 3 per cow and As. 1-6 per sheep.

## Return of grazing in the

| District. | Grazing on payment. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| SOUTHERN CIRCLE. | | | | | Rs. | | | | | Rs. |
| Vellore, North .. .. | (d) 684 | (d) 36,429 | (d) 12,075 | .. | 21,917 | 11 | 382 | .. | .. | 76<br>(a) 2,815 |
| Do. South .. .. | (e) 240 | (f) 18,454<br>(h) 6,509 | (g) 4,001 | .. | 10,155<br>6,509 | 2,954 | 28,190 | 6,321 | .. | (c) 6,076<br>(i) 1,550<br>(i) 6 |
| Do. West .. .. | (w) 69 | (x) 22,319<br>(z) 7,336 | (y) 1,402 | .. | 11,456<br>6,675 | 2,532 | 15,771 | 6,108 | .. | 4,386<br>35<br>a 3 |
| South Arcot .. .. | (d) 347 | (d) 14,201 | (d) 10,386<br>(j) 610 | .. | 10,044<br>203 | 130<br>314<br>395 | 1,573<br>8,064<br>4,927 | 349<br>19,894<br>9,138 | .. .. .. | 376<br>(k) 6,947<br>(a) 4,722 |
| Salem, North .. .. | (l) 1,473 | (m) 81,057 | (n) 13,920 | .. | 35,201 | 62 | 23,850 | 7,466 | .. | 5,165<br>14<br>a 1 |
| Do. South .. .. | (o) 314 | (o) 53,411 | (o) 5,961 | .. | 32,073 | 16 | 2,289 | 591 | .. | 491<br>(p) 218<br>+ 170<br>a 4 |
| Trichinopoly .. | (q) 19 | (q) 675<br>(r) 1,139 | (q) 2,629<br>(r) 48 | ..<br>.. | 761<br>654 | 270 | 8,905 | 9,986 | .. | 2,707<br>(a) 10,670 |
| Madura .. .. | (s) 471 | (t) 48,641 | (u) 26,075 | (t) 537 | 22,371 | .. | | .. | .. | .. |
| Tinnevelly .. .. | (d) 39 | (d) 4,833 | (d) 915 | .. | 2,684 | 410 | 7,684 | 15,194 | .. | 3,020<br>a 2<br>(a) 575<br>(e) 155 |
| Total .. | 3,656 | 295,004 | 78,022 | 537 | 1,60,703 | 7,094 | 96,635 | 74,046 | ... | 50,184 |

* The rates should be specified at the foot of the statement.

*Notes for S.C.*—The full rates are 6 annas per buffalo ; 3 annas per cow, bullock or other animal and 1½ annas per sheep in all districts except Madura where the full rate is 4 annas per cow unit.

(a) Collection from panchayatdars.
(b) Free removal of grass.
(c) Includes excess collection of Rs. 28.
(d) The enhanced rates are 1 rupee per buffalo, 8 annas per cow or bullock and 4 annas per sheep.
(e) 223 buffaloes at 1 rupee each and 17 at 12 annas each.
(f) 16,825 cows at 8 annas each and 1,629 cows at 6 annas each.
(g) 2,335 sheep at 4 annas each and 1,666 sheep at 3 annas each.
(h) Foreign cattle at 1 rupee per cow.
(i) Arrear collection made during the year.
(j) 610 sheep at As. 5-4 per sheep for grazing in 2 blocks on a single permit in Gingee range.
(k) Lease amount of grazing in certain reserves.
(l) 1,139 buffaloes at 12 annas each and 334 buffaloes at 8 annas each.
(m) 48,449 cows at 8 annas each and 32,558 cows at 4 annas each.
(n) 13,514 sheep at 2 annas each and 406 sheep at 4 annas each.
(o) The enhanced rates are treble the full rates.
(p) Grazing assessment for the Malayalee cattle on the Chutteries as per B.P. Forest No. 142, dated 6th October 1915.
(q) The enhanced rates are double the full rates.
(r) The enhanced rates are treble the full rate.
(s) 345 buffaloes at 8 annas each and 126 buffaloes at 14 annas each
(t) 26,653 cows and bullocks and 537 other animals at 4 annas each and 21,988 cows and bullocks at 7 annas each.
(u) 6,779 sheep at 2 annas each and 19,296 sheep at 4 annas each.
(v) Lease amount for grazing in Kanulkuttiparambu reserved forest.
(w) 69 buffaloes at 1 rupee each.
(x) 21,564 cows at 8 annas and 755 at 6 annas each.
(y) 950 sheep at 4 annas and 452 at 3 annas each.
(z) 6,454 foreign cows at 1 rupee each and 882 foreign cows at 4 annas each in Chengam range.
a 1 Penning licence fee.
a 2 Includes excess collection of 1 rupee.
a 3 Represents lump sum deposit collected from the villagers of Melur near Puliyur unreserve for the fulfilment of obligation under the forest village system.
a 4 Added to tally with audited figures.

State forests during 1918–19—*cont.*

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | Grand total of value at full rates. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates.* | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. | | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Value of fees at full rates. | Total value of fees at full rates. | |
| | | | | Actual. | Value at full rates. | | | | | | | | | | | | |
| (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) |
| | | | | | | | | | | | | | | | Rs. | Rs. | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (a) 2,537 | (b) 2,537 | 27,875 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 24,296 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,552 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (b) 11 | (b) 11 | 22,303 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 150 | .. | .. | 28 | 28 | 40,438 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 32,902 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 14,792 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 261 | 2,676 | 202 | 5 | 826 | 826 | 23,197 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,434 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 261 | 2,826 | 202 | 5 | 3,402 | 3,402 | 2,14,289 |

## Return of grazing in the

| District. | Grazing on payment. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | At enhanced or special rates. | | | | | At full rates. | | | | |
| | Buffaloes. | Cows and bullocks. | Sheep. | Other animals. | Fees. | Buffaloes. | Cows and bullocks. | Goats and sheep. | Other animals. | Fees received. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
| **Western Circle.** | | | | | | | | | | |
| *Reserved Forests.* | | | | | Rs. | | | | | Rs. |
| Mangalore, North .. | .. | .. | .. | .. | . | 2,238 | 16,694 | .. | .. | 3,969 |
| Do. South .. | .. | .. | .. | .. | .. | 3,195 | 18,940 | .. | .. | 4,749 |
| Malabar, North .. .. | (a) 2,167 | 4,481 | .. | .. | 4,407<br>† 100 | .. | .. | .. | .. | .. |
| The Nilgiris .. .. | (a) 63 | 3,453 | S 380 | .. | 1,885 | 13,116<br>§ 64 | 18,881<br>§ 12 | S 1,456 | .. | 3,609<br>(h) 141 |
| Kollegal .. .. | (a) 2,824<br>(b) 203 | 68,141<br>1,323 | S 2,402<br>S 696 | .. | 38,014<br>(h) 75 | .. | .. | .. | . | .. |
| Coimbatore, North * .. | (b) 1,708<br>(c) 722<br>(c) 554<br>(d) 389<br>(e) 1,530 | 15,879<br>20,776<br>13,714<br>5,848<br>14,669 | S 1,280<br>S 13,509<br>S 2,171<br>S 578<br>S 1,727 | .. | 4,859<br>14,487<br>11,931<br>6,915<br>23,240<br>(h) 2,769 | .. | .. | .. | .. | .. |
| Do. Central | (a) 72<br>(d) 12 | 11,787<br>999 | S 3,328<br>S 681 | .. | 6,798<br>1,363<br>(h) 2,541<br>(i) 1,279<br>(j) 656 | .. | .. | .. | .. | .. |
| Do. South .. | (a) 287<br>(d) .. | 5,802<br>1,676 | S 233<br>S 10 | .. | 3,246<br>1,681<br>(h) 823<br>(i) 970 | .. | .. | .. | .. | .. |
| Total .. | 10,531 | 168,048 | 26,995 | .. | 1,28,039 | 18,613 | 54,527 | 1,456 | .. | 17,468 |
| *Reserved Lands.* | | | | | | | | | | |
| The Nilgiris .. .. | .. | 186 | .. | .. | 93 | 127 | 293 | .. | .. | 103 |
| Grand total, Presidency.. | 48,454 | 699,382 | S 274,002<br>(g) 82 | 538 | 4,89,483 | 67,800 | 480,177 | (S) 393,137 | .. | 329,466 |

S = Sheep.

*Notes for W.C.*—The full rates are As. 6 per buffalo, As. 3 per cow, bullock or other animals and As. 1-6 per sheep.

(a) Re. 1 per buffalo, As. 8 per cow, bullock or other animals and As. 4 per sheep.
(b) As. 8 per buffalo, As. 4 per cow, bullock or other animals and As. 2 per sheep.
(c) Rs. 1-8-0 per buffalo, As. 12 per cow, bullock or other animals and As. 6 per sheep.
(d) Rs. 2 per buffalo, Re. 1 per cow, bullock or other animals and As. 8 per sheep.
(e) Rs. 2-8-0 per buffalo, Rs. 1-4-0 per cow, bullock or other animals and As. 10 per sheep.
(f) Elephant.
(g) As. 6 per 100 per diem for buffaloes and As. 3 per 100 per diem for cows, bullocks or sheep.
(h) Sale-proceeds of fodder grass.
(i) Revenue from reserves handed over to panchayat management, that of South Coimbatore includes the revenue due for the next year also.
(j) Revenue by lease of the right to graze in certain reserves.

* Buffaloes, cows, etc., brought for a cattle fair charged without distinction at a uniform rate of As. 2 per head.
† Collection at old rates—since refunded after recovery of the permits.
§ Calves, half rates.

State forests during 1918-19—*cont.*

| Number of animals. | | | | | | Grazing free. Number of animals. | | | | | | | | | | Grand total of value at full rates. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| At privileged rates.* | | | | | | By right under settlement. | | | | | During pleasure of Government or otherwise than under settlement. | | | | | |
| | | | | Fees received. | | | | | | | | | | | | |
| Buffaloes. (12) | Cows and bullocks. (13) | Goats and sheep. (14) | Other animals. (15) | Actual. (16) | Value at full rates. (17) | Buffaloes. (18) | Cows and bullocks. (19) | Goats and sheep. (20) | Other animals. (21) | Value of fees at full rates. (22) | Buffaloes. (23) | Cows and bullocks. (24) | Goats and sheep. (25) | Other animals. (26) | Value of fees at full rates. (27) | Total value of fees at full rates. (28) | (29) |
| | | | | Rs. | Rs. | | | | | Rs. | | | | | Rs. | Rs. | Rs. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3,969 |
| .. | .. | .. | * 9,221 | 1,153 | * 1,153 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 5,902 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | (f) 1 | 91 | 91 | 4,598 |
| (g)300 | (g)14,500 | S 46,100 | (g) .. | 236 | 7,153 | .. | .. | .. | .. | . | 2,734 | .. | .. | .. | 1,025 | 1,025 | 18,813 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 38,089 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 64,201 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12,637 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6,720 |
| 300 | 14,500 | 46,100 | 9,221 | 1,389 | 8,306 | .. | .. | .. | .. | .. | 2,734 | .. | .. | 1 | 1,116 | 1,116 | 1,54,929 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 161 | 174 | .. | .. | 93 | 93 | 289 |
| 9,361 | 81,751 | 53,618 | 9,221 | 11,454 | 26,660 | 913 | .. | .. | .. | 1,268 | 9,282 | 70,652 | 1,482 | 22 | 18,332 | 18,332 | 8,65,209 |

Abstract of animals permitted to grazing in reserved forests and reserved lands on payment.

| Circle. | Buffaloes. | Bullocks and cows. | Sheep. | Goats. | Other animals. | Total. |
|---|---|---|---|---|---|---|
| Northern Circle .. .. .. | 53,514 | 280,232 | 148,007 | 82 | .. | 4,81,835 |
| Central Circle .. .. .. .. | 31,780 | 351,885 | 346,131 | .. | 1 | 7,29,797 |
| Southern Circle .. .. .. | 10,750 | 391,639 | 152,068 | .. | 537 | 5,54,994 |
| Western Circle .. .. .. | 29,571 | 237,554 | 74,551 | .. | 9,221 | 3,50,897 |
| Grand Total, Presidency .. | 125,615 | 1,261,310 | 720,757 | 82 | 9,759 | 21,17,523 |

## Annual Form No. 75.

*Forest Department, Madras Presidency.*

Area under artificial reproduction. 1918–19.

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue fro.. date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1918. | Added during the year. | Excluded during the year. | Area on 30th June 1919. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| **Northern Circle.** | | | | | | | | | | |
| ***A.—Regular Plantations.*** | | | | | | | | | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Vizagapatam .. | | | | | | | | | | |
| Gōdāvari, Lower .. | 51 | .. | .. | 51 | .. | 37 | 1 | 42 | 86 | 3,532 |
| Kistna .. .. | 228 | .. | 38 | 190 | .. | 104 | 31,150 | 15,404 | 5,605 | 70,349 |
| Kurnool, East .. | 33 | 3 | .. | 36 | 8 | 110 | 1,579 | 7,429 | 212 | 3,536 |
| Do. West .. | 130 | .. | .. | 130 | .. | .. | 38,471 | 26,045 | .. | .. |
| | 1,430 | .. | .. | 1,430 | .. | 185 | 2,92,254 | 64,132 | .. | 17,898 |
| Total .. | (a)1,872 | 3 | 38 | (a)1,837 | 8 | (b)436 | (c)3,63,455 | (d)1,18,052 | 5,903 | 95,315 |
| ***B.—Taungya plantations.*** | | | | | | | | | | |
| Ganjām .. .. | .. | 2 | .. | 2 | 3 | .. | 3 | .. | .. | .. |
| ***C.—Cultural Operations.*** | | | | | | | | | | |
| Ganjām .. .. | .. | 82 | .. | 82 | .. | .. | .. | .. | .. | .. |
| Vizagapatam .. | 55 | 14 | .. | 69 | 13 | .. | 240 | .. | .. | .. |
| Gōdāvari, Upper .. | .. | 107 | .. | 107 | 59 | .. | 59 | .. | .. | .. |
| Do. Lower .. | 2,402 | 50 | .. | 2,452 | 129 | . | 2,488 | 1,032 | .. | .. |
| Kistna .. .. | 1,233 | 209 | .. | 1,442 | 260 | 96 | 7,722 | 2,899 | 1,956 | * 62,704 |
| Kurnool, East .. | 133 | 125 | .. | 258 | 290 | .. | 10,214 | 3,561 | .. | .. |
| Do. South .. | 287 | 160 | .. | 447 | 235 | .. | 4,564 | 1,738 | .. | .. |
| Do. West .. | 4,006 | 999 | .. | 5,005 | 790 | .. | 22,961 | 2,482 | .. | .. |
| Total .. | (e)8,116 | (f)1,746 | .. | (g)9,862 | (h)1,776 | 96 | (i) and (j) 48,248 | 11,212 | 1,956 | 62,704 |
| Grand total .. | 9,988 | 1,751 | 38 | 11,701 | 1,787 | 532 | 4,11,706 | 1,24,264 | 7,859 | 1,58,019 |
| **Central Circle.** | | | | | | | | | | |
| ***A.—Regular Plantations.*** | | | | | | | | | | |
| Bellary .. .. | 579 | .. | .. | 579 | .. | 22 | 9,423 | † 62,779 | 61 | † 258 |
| Anantapur .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. | 1,755 | .. | 208 | 1,547 | .. | .. | 42,133 | 28,161 | † 12,504 | † 80,926 |
| Cuddapah, North .. | 10 | .. | .. | 10 | .. | .. | 560 | .. | .. | .. |
| Do. South .. | 146 | .. | 108 | 38 | .. | 70 | 23 | 553 | 3,619 | 6,661 |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | † 3,270 | .. | .. | † 3,270 | .. | 199 | 1,56,705 | 16,971 | 9,763 | 2,28,614 |
| Chingleput .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | 60 | .. | .. | 60 | .. | 505 | .. | 1,062 | 8 | 51 |
| Total .. | 5,820 | .. | 316 | 5,504 | .. | 796 | 2,08,844 | 1,09,526 | 25,955 | 3,16,510 |
| ***B.—Taungya Plantations*—Nil.** | | | | | | | | | | |
| ***C.—Cultural Operations.*** | | | | | | | | | | |
| Bellary .. .. | 6,790 | .. | .. | 6,790 | .. | .. | 27,981 | 3,006 | .. | .. |
| Anantapur .. .. | 258 | 187 | 327 | 118 | 43 | .. | 65 | 66 | .. | .. |
| Guntūr .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. | 116 | 584 | .. | 700 | 2,722 | .. | 2,722 | .. | .. | .. |
| Chingleput .. .. | .. | 450 | .. | 450 | 223 | .. | 223 | .. | .. | .. |
| Chittoor .. .. | 1,922 | 683 | .. | 2,605 | 363 | 257 | 617 | 372 | .. | .. |
| Total .. | 9,086 | 1,904 | 327 | 10,663 | 3,351 | 257 | 31,608 | 3,444 | .. | .. |
| Grand total .. | 14,906 | 1,904 | 643 | 16,167 | 3,351 | 1,053 | 2,40,452 | 1,12,970 | 25,955 | 3,16,510 |

* Revised figures furnished by the District Forest Officer.

† Correct figure furnished by the District Forest Officer.

(a) Excludes 8 acres belonging to the Parlākimedi Maliahs.
(b) Do. Rs. 6 do.
(c) Do. Rs. 50 spent on creation in the Parlākimedi Maliahs.
(d) Do. Rs. 405 do.
(e) Do. 14 acres belonging to the Parlākimedi Maliahs.
(f) Do. 30 acres do.
(g) Do. 44 acres do.
(h) Do. Rs. 44 spent in Parlākimedi Maliahs.
(i) Do. Rs. 50 do.
(j) Corrected in the Chief Conservator's office.

## Area under artificial reproduction, 1918–19—*cont.*

| District. | Area in acres. | | | | Expenditure during the year. | | Total expenditure from commencement. | | Revenue during the year. | Total revenue from date of creation of plantation. |
|---|---|---|---|---|---|---|---|---|---|---|
| | On 1st July 1918 | Added during the year. | Excluded during the year. | Area on 30th June 1919. | Creation. | Upkeep. | Creation. | Upkeep. | | |
| | ACS. | ACS. | ACS. | ACS. | RS. | RS. | RS. | RS. | RS. | RS. |
| **SOUTHERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| Vellore, North .. | 1,841 (*a*) −1,643 | 89 | (*b*) 33 | 254 | 1,701 | 1,448 | 21,816 | 1,36,623 | 1,599 | 87,997 |
| Do. South .. | .. | (*b*) 33 18 | .. | 51 | 348 | 116 | 1,965 | 409 | 1,395 | 3,110 |
| Madura .. .. | 1,329 | .. | .. | 1,329 | 141 | 250 | 60,904 | 8,085 | 2,943 | 8,072 |
| Tinnevelly .. | 5,345 | 3 | .. | 5,348 | 325 | 254 | 7,893 | 2,049 | 4,321 | 15,357 |
| Total .. | 6,872 | 143 | 33 | 6,982 | 2,515 | 2,068 | 92,578 | 1,47,166 | 10,258 | 1,14,536 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| Vellore, North .. | 1 | .. | (*c*) 1 | .. | .. | .. | 1 | .. | .. | .. |
| South Arcot .. | 2 | 2 | .. | 4 | 25 | .. | (*d*) 50 | .. | .. | .. |
| Tinnevelly .. | 23 | .. | .. | 23 | .. | .. | 47 | 132 | .. | .. |
| Total .. | 26 | 2 | 1 | 27 | 25 | .. | 98 | 132 | .. | .. |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Vellore, North .. | 1,149 | 267 | 10 | 1,406 | 317 | 56 | 613 | 154 | .. | 579 |
| Do. South .. | 10,980 | 3,613 | .. | 14,593 | 210 | .. | 1,012 | .. | .. | .. |
| Do. West .. | 988 | 3 | .. | 991 | 2 | .. | 125 | .. | .. | .. |
| South Arcot .. | 6,826 | 311 | .. | 7,137 | 84 | .. | 580 | 2,779 | .. | .. |
| Salem, North .. | 143 | .. | .. | 143 | .. | .. | 9,064 | .. | .. | .. |
| Do. South .. | 1,303 (*e*) +1,242 | 615 | .. | 3,158 | 2,047 | 973 | 3,619 | 1,073 | .. | .. |
| Tinnevelly .. | 4,202 | 134 | .. | 4,336 | 54 | 24 | 5,593 | 6,410 | .. | 69 |
| Total .. | 26,833 | 4,941 | 10 | 31,764 | 2,714 | 1,053 | 20,606 | 10,416 | .. | 648 |
| Grand total .. | 33,731 | 5,086 | 44 | 38,773 | 5,254 | 3,121 | 1,13,282 | 1,57,714 | 10,258 | 1,15,184 |
| **WESTERN CIRCLE.** | | | | | | | | | | |
| *A.—Regular Plantations.* | | | | | | | | | | |
| Mangalore, South .. | 52 | .. | .. | 52 | .. | .. | 10,357 | .. | .. | 516 |
| Malabar, North .. | 379 | .. | .. | 379 | .. | 134 | 15,272 | 20,262 | 242 | 4,174 |
| Do. South .. | 6,554 | 26 | .. | 6,580 | 10,654 | 7,642 | 5,52,694 | 5,62,442 | 3,55,814 | 29,17,853 |
| The Nilgiris .. | 1,743 | .. | .. | 1,743 | .. | 571 | 6,462 | 3,13,599 | 57,029 | 7,73,630 |
| Coimbatore, South .. | 134 | .. | .. | 134 | .. | .. | 9,947 | 4,632 | 312 | 312 |
| Total .. | 8,862 | 26 | .. | 8,888 | 10,654 | 8,347 | 5,94,732 | 9,00,935 | 4,13,397 | 36,96,485 |
| *B.—Taungya Plantations.* | | | | | | | | | | |
| Malabar, North .. | 635 | .. | .. | 635 | .. | .. | .. | 10,828 | .. | .. |
| The Nilgiris .. | 32 | .. | .. | 32 | .. | 187 | 504 | 3,819 | .. | .. |
| Total .. | 667 | .. | .. | 667 | .. | 187 | 504 | 14,647 | .. | .. |
| *C.—Cultural Operations.* | | | | | | | | | | |
| Bangalore, North .. | .. | 224 | .. | 224 | 70 | .. | 97 | .. | .. | .. |
| Malabar, North .. | 3,545 | 1,045 | .. | 4,590 | 431 | 409 | 4,655 | 8,481 | .. | .. |
| Kollegal .. .. | .. | 27 | .. | 27 | 33 | 7 | * 515 | 156 | .. | .. |
| Coimbatore, North .. | 243 | 308 | 67 | 484 | 576 | 111 | * 824 | * 137 | .. | .. |
| Do. Central .. | † 2,001 | 950 | 1,680 | 1,271 | 3,127 | 600 | * 3,553 | * 702 | .. | .. |
| Do. South .. | 1,220 | 31 | .. | 1,251 | 651 | 175 | 3,632 | ‡ 1,880 | .. | .. |
| Total .. | 7,009 | 2,585 | 1,747 | 7,847 | 4,888 | 1,302 | 13,276 | 11,356 | .. | .. |
| Grand total, W.C. .. | 16,538 | 2,611 | 1,747 | 17,402 | 15,542 | 9,836 | 6,08,512 | 9,26,938 | 4,13,397 | 36,96,485 |
| Total A. Regular Plantations. | 23,426 | 172 | 387 | 23,211 | 13,177 | 11,647 | 12,59,609 | 12,70,679 | 4,55,513 | 42,22,846 |
| Total B. Taungya Plantations. | 693 | 4 | 1 | 696 | 28 | 187 | 602 | 14,779 | .. | .. |
| Total C. Cultural operations. | 51,044 | 11,176 | 2,084 | 60,136 | 12,729 | 2,708 | 113,738 | 36,428 | 1,956 | 63,352 |
| Grand total, Presidency. | 75,163 | 11,352 | 2,472 | 84,043 | 25,934 | 14,542 | 13,73,949 | 13,21,886 | 457,469 | 42,86,198 |

(*a*) Last year the areas of the whole reserves were shown as under plantations but now only the actual area under Plantations have been shown.
(*b*) Transferred from North Vellore to South Vellore and corresponding expenditure also transferred.
(*c*) There are no Taungya plantations. Hence omitted.
(*d*) The expenditure of Rs. 25 was omitted to be shown in the last year's return.
(*e*) Correct figure furnished by the District Forest Officer.

* Excludes amounts relating to areas abandoned.
† Rupees 406 were spent in forming nurseries dibbling seeds, etc., areas not furnished.
‡ Revised figure.

ANNUAL

*Forest Department,*

Outturn (in thousands of cubic feet solid) of timber and fuel

| Division. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| | | | | | | | | | | | | | | | NORTHERN |
| | | | | | (*In thousands of cubic feet.*) | | | | | | | | | | *I. Reserved* |
| Ganjām .. .. | 28 | 60 | .. | .. | 88 | 2 | 42 | .. | .. | 44 | .. | 2 | .. | .. | 2 |
| Vizagapatam .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Gōdāvari, Lower .. | 1 | 25 | .. | .. | 26 | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. |
| Kistna .. .. | .. | 3 | .. | .. | 3 | .. | 3 | .. | .. | 3 | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | 1 | .. | .. | .. | 1 | 3 | .. | 1 | .. | 4 | 6 | .. | .. | .. | 6 |
| Do. South .. .. | 4 | 17 | 1 | .. | 22 | 2 | | 1 | .. | 12 | .. | 5 | .. | .. | 5 |
| Do. West .. .. | 5 | .. | .. | .. | 5 | 8 | 3 | 5 | 1 | 17 | 2 | .. | 2 | .. | 4 |
| Total, Reserved forests. | 40 | 105 | 1 | .. | 146 | 17 | 57 | 7 | 1 | 82 | 8 | 7 | 2 | .. | 17 |
| | | | | | | | | | | | | | | | *II. Unreserved* |
| Ganjām .. .. | 58 | 53 | 3 | .. | 114 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| Vizagapatam .. .. | .. | . | .. | .. | .. | .. | 28 | .. | .. | 28 | .. | .. | .. | .. | .. |
| Gōdāvari, Upper .. | 30 | 2 | .. | .. | 32 | .. | 4 | .. | .. | 4 | .. | .. | .. | .. | .. |
| Do. Lower .. | 2 | 173 | 4 | .. | 179 | .. | .. | .. | .. | .. | .. | 19 | .. | .. | 19 |
| Kistna .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kurnool, East .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | 4 | 1 | .. | 5 | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | 1 |
| Do. West .. | .. | .. | .. | .. | .. | .. | 5 | .. | .. | 5 | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | 90 | 232 | 8 | .. | 330 | .. | 37 | 1 | .. | 38 | .. | 20 | 1 | .. | 21 |
| Grand total .. | (*b*)130 | (*c*) 337 | (*d*) 9 | .. | (*e*) 476 | (*f*) 17 | (*g*) 94 | (*h*) 8 | 1 | (*i*) 120 | (*j*) 8 | 27 | 3 | .. | (*k*) 38 |
| | | | | | | | | | | | | | | | CENTRAL |
| | | | | | | | | | | | | | | | *I. Reserved* |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 53 | .. | .. | 53 | .. | .. | .. | 42 | 42 | .. | .. | .. | .. | .. |
| Guntūr .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | 15 | .. | .. | 15 | .. | .. | .. | .. | .. |
| Nellore .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | 1 | 3 | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Reserved forests. | 1 | 56 | .. | .. | 57 | .. | 15 | .. | 42 | 57 | .. | .. | .. | .. | .. |
| | | | | | | | | | | | | | | | *II. Lease* |
| Bellary .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

CENTRAL CIRCLE REMARKS.

*Reserved forests, Leased forest and unreserved lands—Timber and fuel—Government agency and Free grantees.*—Actuals.

*Timber and fuel—Purchasers.*—Estimates based on accounts furnished by purchasers in reserved forests and on money value realize in unreserved lands.

(*a*) Corrected in the Chief Conservator's Office.
(*b*) Excludes ·598 (thousands) of cubic feet belonging to Parlākimedi Maliahs.
(*c*) Do. 9·944 do. do.
(*d*) Do. ·072 do. do.
(*e*) Do. 10·714 do. do.
(*f*) Do. ·774 do. do.
(*g*) Do. 6·197 do. do.
(*h*) Do. 1·103 do. do.
(*i*) Do. 8·074 do. do.
(*j*) Do. ·220 do. do.
(*k*) Do ·220 do. do.

FORM No. 76.

*Madras Presidency.*

during the year 1918–19 and agency of exploitation.

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | Total outturn. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | |
| (17) | (18) | (19) | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | (*In thousands of cubic feet.*) | | | | | | | | |
| .. | .. | .. | .. | .. | 30 | 104 | .. | .. | 134 | 7 | 296 | .. | .. | 303 | 437 |
| 2 | 4 | .. | .. | 6 | 3 | 4 | .. | .. | 7 | 6 | 99 | .. | .. | 105 | 112 |
| .. | .. | .. | .. | .. | 3 | 25 | .. | .. | 28 | 18 | 1,619 | .. | .. | 1,637 | 1,665 |
| .. | 6 | .. | .. | 6 | .. | 12 | .. | .. | 12 | 1 | 737 | .. | .. | 738 | 750 |
| .. | .. | .. | .. | .. | 10 | .. | 1 | .. | 11 | 19 | 8 | .. | .. | 27 | 38 |
| .. | 1 | .. | .. | 1 | 6 | 32 | 2 | .. | 40 | 16 | 163 | .. | .. | 179 | 219 |
| .. | .. | .. | .. | .. | 15 | 3 | 7 | 1 | 26 | 248 | 13 | .. | 154 | 415 | 441 |
| 2 | 11 | .. | .. | 13 | 67 | 180 | 10 | 1 | 258 | 315 | 2,935 | .. | 154 | 3,404 | 3,662 |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 58 | 54 | 3 | .. | 115 | 25 | 66 | .. | .. | 91 | 206 |
| .. | 1 | .. | .. | 1 | .. | 29 | .. | .. | 29 | .. | 30 | .. | .. | 30 | 59 |
| 12 | 12 | .. | 2 | 26 | 42 | 18 | .. | 2 | 62 | 7 | 58 | .. | .. | 65 | 127 |
| .. | .. | .. | .. | .. | 2 | 192 | 4 | .. | 198 | .. | 340 | .. | .. | 340 | 538 |
| .. | 28 | 9 | .. | 37 | .. | 28 | 9 | .. | 37 | .. | 27 | .. | .. | 27 | 64 |
| .. | .. | 4 | .. | 4 | .. | .. | 4 | .. | 4 | .. | 23 | .. | .. | 23 | 27 |
| .. | 24 | .. | .. | 24 | .. | 28 | 3 | .. | 31 | .. | 30 | .. | .. | 30 | 61 |
| .. | .. | .. | .. | .. | .. | 5 | .. | .. | 5 | .. | 78 | .. | .. | 78 | 83 |
| 12 | 65 | 13 | 2 | 92 | 102 | 354 | 23 | 2 | 481 | 32 | 652 | .. | .. | 684 | 1,165 |
| (*l*) 14 | (*m*)76 | (*n*) 13 | 2 | (*o*) 105 | (*p*) 169 | (*q*) 534 | (*r*) 33 | 3 | (*s*) 739 | (*t*) 347 | (*u*)3,587 | .. | 154 | (*v*) 4,088 | (*w*) 4,827 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 282 | .. | .. | 286 | 286 |
| .. | .. | .. | .. | .. | .. | 53 | .. | 42 | 95 | .. | 63 | .. | .. | 63 | 158 |
| 6 | 15 | .. | .. | 21 | 6 | 15 | .. | .. | 21 | 3 | 259 | .. | .. | 262 | 283 |
| 1 | 36 | 1 | .. | 38 | 1 | 36 | 1 | .. | 38 | .. | 337 | .. | .. | 337 | 375 |
| 2 | 69 | .. | .. | 71 | 2 | 69 | .. | .. | 71 | 1 | 1,413 | .. | .. | 1,414 | 1,485 |
| 1 | 25 | 1 | .. | 27 | 1 | 40 | 1 | .. | 42 | 21 | 1,084 | .. | .. | 1,105 | 1,147 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 | 618 | .. | .. | 658 | 658 |
| .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 4 | 7 | 110 | .. | .. | 117 | 121 |
| 1 | 8 | 1 | .. | 10 | 1 | 8 | 1 | .. | 10 | 6 | 242 | .. | .. | 248 | 258 |
| 11 | 153 | 3 | .. | 167 | 12 | 224 | 3 | 42 | 281 | 82 | 4,408 | .. | .. | 4,490 | 4,771 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

*Note for the Northern Circle.*

REMARKS.—The figures are actuals except in the following cases:—

(1) *Ganjām*—Unreserved lands—Column 3.—This includes an estimated quantity of 24,820 cubic feet; of which, 6,640 cubic feet were arrived at by conversion of value at 20 cubic feet per rupee and 18,180 cubic feet at 15 cubic feet per tree removed.

(2) *Gōdāvari, Lower*—Unreserved lands—Column 23.—This includes 41,000 cubic feet of timber obtained by the conversion of sale amount into outturn at one cubic foot for one anna.

(3) *Kistna*—Unreserved lands—Columns 18 and 28.—Estimates calculated at one cubic foot per anna on the value realized.

(4) *Kurnool, West*—Unreserved lands—Column 28.—The sale amount is converted into outturn, the factor of conversion being 45 cubic feet for Re. 1-4-0.

(*l*) Excludes 1·256 (thousands of cubic feet) belonging to Parlakimedi Maliahs.
(*m*) Do. 10·095 do. do. do.
(*n*) Do. ·040 do. do. do.
(*o*) Do. 11·391 do. do. do.
(*p*) Do. 2·848 do. do. do.
(*q*) Do. 26·236 do. do. do.
(*r*) Do. 1·315 do. do. do.
(*s*) Do. 80·399 do. do. do.
(*t*) Do. 19·800 do. do. do.
(*u*) Do. 99·371 do. do. do.
(*v*) Do. 119·531 do. do. do.
(*w*) Do. 149·930 do. do. do.

Outturn (in thousands of cubic feet or thousands of cubic feet solid) of timber and fuel

| Division. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| **CENTRAL** | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Bellary .. .. .. | .. | .. | .. | .. | .. | .. | 42 | 1 | . | 43 | .. | .. | .. | .. | .. |
| Anantapur .. .. | .. | 87 | .. | .. | 87 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Guntūr .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | .. | .. |
| Cuddapah, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Nellore .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chingleput .. .. | .. | 25 | 5 | .. | 30 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Chittoor .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, Unreserved lands. | .. | 112 | 5 | .. | 117 | .. | 42 | 1 | .. | 43 | .. | .. | .. | .. | .. |
| Grand total .. | 1 | 168 | 5 | .. | 174 | .. | 57 | 1 | 42 | 100 | .. | .. | .. | .. | .. |
| **SOUTHERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Arcot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | .. | .. | .. | 4 |
| Do. South .. .. | 1 | 3 | .. | .. | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Madura .. .. .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | 77 | .. | .. | 77 | .. | 95 | .. | .. | 95 | .. | 7 | .. | .. | 7 |
| Total .. | 9 | 80 | .. | .. | 89 | .. | 95 | .. | .. | 95 | 5 | 7 | .. | .. | 12 |
| *II. Leased* | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Arcot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 |
| Do. South .. .. | 1 | 5 | .. | .. | 6 | .. | 6 | 13 | .. | 19 | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Madura .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 2 | 5 | .. | .. | 7 | .. | 6 | 13 | .. | 19 | 2 | .. | .. | .. | 2 |
| *Abs* | | | | | | | | | | | | | | | |
| Vellore, North .. .. | 3 | .. | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. West .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| South Arcot .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 | .. | .. | .. | 6 |
| Do. South .. .. | 2 | 8 | .. | .. | 10 | .. | 6 | 13 | .. | 19 | .. | .. | .. | .. | .. |
| Trichinopoly .. .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Madura .. .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Tinnevelly .. .. | .. | 77 | .. | .. | 77 | .. | 95 | .. | .. | 95 | .. | 7 | .. | .. | 7 |
| Grand total .. | 11 | 85 | .. | .. | 96 | .. | 101 | 13 | .. | 114 | 7 | 7 | .. | .. | 14 |
| **WESTERN** | | | | | | | | | | | | | | | |
| *I. Reserved* | | | | | | | | | | | | | | | |
| Mangalore, North .. | 21 | .. | .. | .. | 21 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | 88 | 7 | .. | 6 | 101 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Malabar, North .. | .. | .. | .. | .. | .. | 5 | .. | .. | .. | 5 | 114 | .. | .. | .. | 114 |
| Do. South .. | 23 | 17 | .. | .. | 40 | 20 | .. | .. | .. | 20 | .. | .. | .. | .. | .. |
| The Nilgiris .. | .. | 2 | .. | .. | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. | .. | .. | .. |
| Coimbatore, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Do. Central .. | 8 | 128 | .. | .. | 136 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | 7 | 6 | .. | .. | 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | 147 | 160 | .. | 6 | 313 | 27 | .. | .. | .. | 27 | 115 | .. | .. | .. | 115 |
| *II. Leased* | | | | | | | | | | | | | | | |
| Malabar, South .. | 219 | .. | .. | .. | 219 | 60 | .. | .. | .. | 60 | .. | .. | .. | .. | .. |
| The Nilgiris .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81 | .. | .. | .. | 81 |
| Coimbatore, South .. | 15 | .. | .. | .. | 15 | .. | .. | .. | .. | .. | 6 | .. | .. | .. | 6 |
| Total .. | 234 | .. | .. | .. | 234 | 60 | .. | .. | .. | 60 | 87 | .. | .. | .. | 87 |

during the year 1918-19, and agency of exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | Total outturn. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | (32) |
| CIRCLE—*cont.* | | | | | | | | | | | | | | | |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | .. | 42 | 1 | .. | 43 | .. | 125 | .. | .. | 125 | 168 |
| .. | .. | .. | .. | .. | .. | 87 | .. | .. | 87 | .. | 132 | .. | .. | 132 | 219 |
| .. | 92 | 11 | .. | 103 | .. | 92 | 11 | .. | 103 | .. | 320 | .. | .. | 320 | 423 |
| .. | 9 | .. | .. | 9 | .. | 9 | .. | .. | 9 | .. | 38 | .. | .. | 38 | 47 |
| .. | 16 | .. | .. | 16 | .. | 16 | .. | .. | 16 | .. | 7 | .. | .. | 7 | 23 |
| .. | 16 | .. | .. | 16 | .. | 16 | .. | .. | 16 | .. | 142 | .. | .. | 142 | 158 |
| .. | 32 | 10 | .. | 42 | .. | 32 | 10 | .. | 42 | .. | 76 | .. | .. | 76 | 118 |
| .. | .. | .. | .. | .. | .. | 25 | 5 | .. | 30 | .. | 125 | .. | .. | 125 | 155 |
| .. | 159 | 4 | .. | 163 | .. | 159 | 4 | .. | 163 | .. | 132 | .. | .. | 132 | 295 |
| .. | 324 | 25 | .. | 349 | .. | 478 | 31 | .. | 509 | .. | 1,097 | .. | .. | 1,097 | 1,606 |
| 11 | 477 | 28 | .. | 516 | 12 | 702 | 34 | 42 | 790 | 82 | 5,505 | .. | .. | 5,587 | 6,377 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 3 | .. | .. | .. | 3 | 2 | 226 | .. | .. | 228 | 231 |
| 2 | 4 | .. | .. | 6 | 3 | 4 | .. | .. | 7 | 9 | 130 | .. | .. | 139 | 146 |
| 7 | 1 | .. | .. | 8 | 8 | 1 | .. | .. | 9 | 1 | 55 | .. | .. | 56 | 65 |
| 4 | .. | .. | .. | 4 | 4 | .. | .. | .. | 4 | 3 | 310 | .. | .. | 313 | 317 |
| .. | 1 | .. | .. | 1 | 4 | 1 | .. | .. | 5 | 1 | 148 | .. | .. | 149 | 154 |
| .. | .. | .. | .. | .. | 1 | 3 | .. | .. | 4 | .. | 66 | .. | .. | 66 | 70 |
| .. | 1 | .. | .. | 1 | 2 | 1 | .. | .. | 3 | 2 | 138 | .. | .. | 140 | 143 |
| .. | 2 | .. | .. | 2 | 2 | 2 | .. | .. | 4 | 1 | 570 | .. | .. | 571 | 575 |
| 1 | 6 | .. | .. | 7 | 1 | 185 | .. | .. | 186 | 21 | 794 | .. | .. | 815 | 1,001 |
| 14 | 15 | .. | .. | 29 | 28 | 197 | .. | .. | 225 | 40 | 2,437 | .. | .. | 2,477 | 2,702 |
| *Forests*—Nil. | | | | | | | | | | | | | | | |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 53 | 3 | .. | 56 | .. | 53 | 3 | .. | 56 | .. | 92 | .. | .. | 92 | 148 |
| .. | 20 | 3 | .. | 23 | 1 | 20 | 3 | .. | 24 | .. | 17 | .. | .. | 17 | 41 |
| .. | 10 | 2 | .. | 12 | .. | 10 | 2 | .. | 12 | .. | 7 | .. | .. | 7 | 19 |
| .. | 13 | 7 | .. | 20 | .. | 13 | 7 | .. | 20 | .. | 274 | .. | .. | 274 | 294 |
| .. | 101 | 5 | .. | 106 | 2 | 101 | 5 | .. | 108 | .. | 141 | .. | .. | 141 | 249 |
| .. | 55 | .. | .. | 55 | 1 | 66 | 13 | .. | 80 | 3 | 65 | .. | .. | 68 | 148 |
| .. | 94 | 4 | .. | 98 | .. | 94 | 4 | .. | 98 | .. | 126 | .. | .. | 126 | 224 |
| .. | 198 | .. | .. | 198 | .. | 198 | .. | .. | 198 | .. | 84 | .. | .. | 84 | 282 |
| .. | .. | 12 | .. | 12 | .. | .. | 12 | .. | 12 | .. | 158 | 4 | .. | 162 | 174 |
| .. | 544 | 36 | .. | 580 | 4 | 555 | 49 | .. | 608 | 3 | 964 | 4 | .. | 971 | 1,579 |
| *tract.* | | | | | | | | | | | | | | | |
| .. | 53 | 3 | .. | 56 | 3 | 53 | 3 | .. | 59 | 2 | 318 | .. | .. | 320 | 379 |
| 2 | 24 | 3 | .. | 29 | 4 | 24 | 3 | .. | 31 | 9 | 147 | .. | .. | 156 | 187 |
| 7 | 11 | 2 | .. | 20 | 8 | 11 | 2 | .. | 21 | 1 | 62 | .. | .. | 63 | 84 |
| 4 | 13 | 7 | .. | 24 | 4 | 13 | 7 | .. | 24 | 3 | 584 | .. | .. | 587 | 611 |
| .. | 102 | 5 | .. | 107 | 6 | 102 | 5 | .. | 113 | 1 | 289 | .. | .. | 290 | 403 |
| .. | 55 | .. | .. | 55 | 2 | 69 | 13 | .. | 84 | 3 | 131 | .. | .. | 134 | 218 |
| .. | 95 | 4 | .. | 99 | 2 | 95 | 4 | .. | 101 | 2 | 264 | .. | .. | 266 | 367 |
| .. | 200 | .. | .. | 200 | 2 | 200 | .. | .. | 202 | 1 | 654 | .. | .. | 655 | 857 |
| 1 | 6 | 12 | .. | 19 | 1 | 185 | 12 | .. | 198 | 21 | 952 | 4 | .. | 977 | 1,175 |
| 14 | 559 | 36 | .. | 609 | 32 | 752 | 49 | .. | 833 | 43 | 3,401 | 4 | .. | 3,448 | 4,281 |
| CIRCLE. | | | | | | | | | | | | | | | |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | 23 | .. | .. | 23 | 21 | 23 | .. | .. | 44 | 130 | 746 | .. | .. | 876 | 920 |
| .. | .. | .. | .. | .. | 88 | 7 | .. | 6 | 101 | 126 | 36 | .. | .. | 162 | 263 |
| .. | .. | .. | .. | .. | 119 | .. | .. | .. | 119 | .. | .. | .. | .. | .. | 119 |
| .. | .. | .. | .. | .. | 43 | 17 | .. | .. | 60 | 1 | .. | .. | .. | 1 | 61 |
| .. | .. | .. | .. | .. | .. | 2 | .. | .. | 2 | 520 | 14 | .. | .. | 534 | 536 |
| .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | 277 | .. | .. | 277 | 279 |
| .. | .. | .. | .. | .. | 4 | .. | .. | .. | 4 | .. | 589 | .. | .. | 589 | 593 |
| 3 | .. | .. | .. | 3 | 8 | 128 | .. | .. | 136 | 33 | 1,769 | .. | .. | 1,802 | 1,938 |
| .. | .. | .. | .. | .. | 9 | 16 | .. | .. | 25 | .. | 377 | .. | .. | 377 | 402 |
| 2 | 10 | .. | .. | 12 | | | | | | | | | | | |
| 5 | 33 | .. | .. | 38 | 294 | 193 | .. | 6 | 493 | 810 | 3,808 | .. | .. | 4,618 | 5,111 |
| *Forests.* | | | | | | | | | | | | | | | |
| .. | .. | .. | .. | .. | 279 | .. | .. | .. | 279 | 1 | .. | .. | .. | 1 | 280 |
| .. | .. | .. | .. | .. | 81 | .. | .. | .. | 81 | .. | .. | .. | .. | .. | 81 |
| .. | .. | .. | .. | .. | 21 | .. | .. | .. | 21 | .. | .. | .. | .. | .. | 21 |
| .. | .. | .. | .. | .. | 381 | .. | .. | .. | 381 | 1 | .. | .. | .. | 1 | 382 |

*Timber and fuel—Government agency and free grantees.*—Actuals.
*Reserved forests—Purchasers—Timber*—Estimates based on the amounts realized.
*Reserved forests and reserved lands—Purchasers—Fuel.*—Estimates based chiefly on the accounts furnished by coupe contractors.
*Unreserved lands—Timber and fuel—Purchasers.*—Estimates based on the money value realized.

Outturn (in thousands of cubic feet or thousands of cubic feet solid) of timber and fuel

| Division. | Timber in the rough logs. | | | | | Timber in the rough poles. | | | | | Sawn or square timber. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. | Government. | Purchasers. | Free-grantees. | Right-holders. | Total. |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) |
| WESTERN | | | | | | | | | | | | | | | |
| *III. Reserved* | | | | | | | | | | | | | | | |
| *IV. Unreserved* | | | | | | | | | | | | | | | |
| Mangalore, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | 127 | .. | .. | 127 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Malabar, North .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| The Nilgiris .. | .. | 19 | .. | .. | 19 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Kollegal .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Coimbatore, North .. | .. | 39 | .. | .. | 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. Central.. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Do. South .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | .. | 185 | .. | .. | 185 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Grand total .. | 381 | 345 | .. | 6 | 732 | 87 | .. | .. | .. | 87 | 202 | .. | .. | .. | 202 |
| Presidency total— | | | | | | | | | | | | | | | |
| *Reserved Forests* .. | 197 | 401 | 1 | 6 | 605 | 44 | 167 | 7 | 43 | 261 | 128 | 14 | 2 | .. | 144 |
| *Leased Forests* .. | 234 | .. | .. | .. | 234 | 60 | .. | .. | .. | 60 | 87 | .. | .. | .. | 87 |
| *Unreserved Lands.* .. | 92 | 534 | 13 | .. | 639 | .. | 85 | 15 | .. | 100 | 2 | 20 | 1 | .. | 23 |
| Grand total, Presidency. | 523 | 935 | 14 | 6 | 1,478 | 104 | 252 | 22 | 43 | 421 | 217 | 34 | 3 | .. | 254 |

REMARKS.—The figures are actuals except in the following cases:—

| | Factor of conversion. |
|---|---|
| *Mangalore, North*—Outturn under "purchasers" unreserved lands. | *Timber.*—The sale amount is converted into yield, the factor of conversion being 16 cubic feet per rupee.<br>*Fuel.*—The sale amount is converted into yield, the factor of conversion being 3 pies per cubic foot. |
| *Mangalore, South*—Outturn under all agencies except "Government" | One tree = 25 cubic feet. |
| *Malabar, North*—Outturn under purchasers unreserved lands .. | *Timber.*—Estimate based on money value collected at four annas per cubic foot.<br>*Fuel.*—Estimate based on money value collected at five annas per 20 cubic feet. |
| *Malabar, South*—Reserved forests (column 2), 6,200 cubic feet .. | On log = 20 cubic feet. |
| Leased forests (column 2), 10,846 do. .. | One log of above 4 candies = 52 cubic feet.<br>Do. from 2 to 4 candies = 26 cubic feet.<br>Do. under 2 candies = 20 cubic feet.<br>One short log = 4 cubic feet.<br>Measurables = 6 cubic feet. |
| Reserved forests (column 7), 19,820 do. .. | Smaller classes of saplings are calculated approximately as per standard measurements |
| Leased forests (column 7), 37,940 do. .. | |
| Reserved and leased forests .. .. .. .. | Approximately calculated at ¼ cubic foot for kariyas and ⅛ cubic foot for junglewood posts. |
| Fuel column 27 .. .. .. .. | |
| *The Nilgiris*—Unreserved lands (column 3) .. .. .. .. | Calculated with reference to money value at one anna per cubic foot. |
| *Kollegal*—Reserved forests (column 7) .. .. .. .. | 230 poles; 1 pole = 6·52 cubic feet. |
| *Central Coimbatore*—Unreserved lands (columns 18, 19 and 28) .. | The amount is converted into yield, the factor of conversion being one anna per cubic foot. |
| *South Coimbatore.*—Miscellaneous timber and fuel .. .. | The figures are reported to be very rough estimates. |

during the year 1918-19 and agency of exploitation—*cont.*

| Miscellaneous. | | | | | Total timber. | | | | | Fuel. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Government. (17) | Purchasers. (18) | Free-grantees. (19) | Right-holders. (20) | Total. (21) | Government. (22) | Purchasers. (23) | Free-grantees. (24) | Right-holders. (25) | Total. (26) | Government. (27) | Purchasers. (28) | Free-grantees. (29) | Right-holders. (30) | Total. (31) | Total outturn. (32) |
| CIRCLE—cont. | | | | | | | | | | | | | | | |
| *Lands*—Nil. | | | | | | | | | | | | | | | |
| *Lands.* | | | | | | | | | | | | | | | |
| .. | 453 | .. | 13 | 466 | .. | 453 | .. | 13 | 466 | .. | 483 | .. | .. | 483 | 949 |
| .. | .. | .. | .. | .. | .. | 127 | .. | .. | 127 | .. | 149 | .. | .. | 149 | 276 |
| .. | 7 | .. | .. | 7 | .. | 7 | .. | .. | 7 | .. | 60 | .. | .. | 60 | 67 |
| .. | .. | .. | .. | .. | .. | 19 | .. | .. | 19 | .. | .. | .. | .. | .. | 19 |
| .. | 2 | .. | .. | 2 | .. | 2 | .. | .. | 2 | .. | 2 | .. | .. | 2 | 4 |
| .. | .. | .. | .. | .. | .. | 39 | .. | .. | 39 | 5 | 13 | .. | .. | 18 | 57 |
| .. | 49 | 8 | .. | 57 | .. | 49 | 8 | .. | 57 | .. | 96 | .. | .. | 96 | 153 |
| .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 |
| .. | 511 | 9 | 13 | 533 | .. | 696 | 9 | 13 | 718 | 5 | 803 | .. | .. | 808 | 1,526 |
| 5 | 544 | 9 | 13 | 571 | 675 | 889 | 9 | 19 | 1,592 | 816 | 4,611 | .. | .. | 5,427 | 7,019 |
| 32 | 212 | 3 | .. | 247 | 401 | 794 | 13 | 49 | 1,257 | 1,247 | 13,583 | .. | 154 | 14,989 | 16,246 |
| .. | .. | .. | .. | .. | 331 | .. | .. | .. | 331 | 1 | .. | .. | .. | 1 | 332 |
| 12 | 1,444 | 83 | 15 | 1,554 | 106 | 2,083 | 112 | 15 | 2,316 | 40 | 3,516 | 4 | .. | 3,560 | 5,876 |
| 44 | 1,656 | 86 | 15 | 1,801 | 888 | 2,877 | 125 | 64 | 3,961 | 1,288 | 17,104 | 4 | 154 | 18,550 | 22,504 |

## ANNUAL FORM No. 77.

*Forest Department, Madras Presidency.*

Outturn of minor forest produce during the year 1918–19.

| Circle. | Description of produce. | Produce removed or utilized | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government agency. | | By purchasers. | By free grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | *Reserved Forests.* | NO. | RS. | RS. | RS. | RS | RS. |
| | Bamboos .. .. .. | 1,013,964 | 22,606 | 68,581 | 280 | 61 | 91,478 |
| | Grazing and fodder grass .. | .. | .. | 98,672 | 13,547 | 1,138 | 1,13,357 |
| | *Other produce.* | QRS. | | | | | |
| | Grass (hay, thatch, korai, etc.). | 10,343 | 96 | 5,076 | 111 | .. | 5,283 |
| | Tamarind, soapnuts, galnuts, nux-vomica, shekoi, etc. | 10,713 | 18,435 | 3,044 | .. | 23,070 | 44,549 |
| | Horns, honey, wax, resin, gum, skins, etc. | .. | .. | 1,731 | .. | .. | 1,731 |
| | Tangedu, etc., barks and fibres. | 37,268 | 19,184 | 80,427 | .. | 1 | 99,612 |
| | Stone, gravel, earth, etc. .. | 6,494 | 182 | 382 | 37 | .. | 601 |
| | Leaves for platters .. .. | .. | .. | 2 | .. | .. | 2 |
| | Date and palmyra leaves, stalks, etc. | .. | .. | 280 | .. | .. | 280 |
| | Manure leaves and thorns .. | .. | .. | 400 | .. | .. | 400 |
| | Miscellaneous including tree-tapping and tree owner's fees. | 16,127 | 7,428 | 972 | .. | 500 | 8,900 |
| | Total minor produce .. | 81,245 | 45,325 | 92,314 | 148 | 23,571 | 1,61,358 |
| | Total, Reserved forests .. | .. | 67,931 | 2,59,517 | 13,975 | 24,770 | 3,66,193 |
| | *Reserved Lands.* | NO. | | | | | |
| | Bamboos .. .. .. | 400 | 4 | 54 | .. | .. | 58 |
| | Grazing and fodder grass .. | .. | .. | 4,020 | .. | .. | 4,020 |
| | *Other produce.* | QRS. | | | | | |
| Northern Circle .. | Grass (tharbi, korai, etc.) .. | 944 | 2 | 764 | .. | .. | 766 |
| | Tamarind, soapnuts, galnuts, nux-vomica, shekoi, etc. | 66 | 47 | 13,467 | .. | .. | 13,514 |
| | Honey, horns, wax, resin, gum, skins, etc. | .. | .. | 363 | .. | .. | 363 |
| | Tangedu, etc., barks and fibres. | 54 | 5 | 13,590 | .. | .. | 13,595 |
| | Date and palmyra leaves, stalks, etc. | .. | .. | 149 | .. | .. | 149 |
| | Miscellaneous including tree-tapping and tree owner's fees. | 45 | 45 | 2,025 | .. | .. | 2,070 |
| | Total minor produce .. | 1,109 | 99 | 30,358 | .. | .. | 30,457 |
| | Total, Reserved lands .. | .. | 103 | 34,432 | .. | .. | 34,535 |
| | *Unreserved Lands.* | NO. | | | | | |
| | Bamboos .. .. .. .. | 15,680 | 182 | 18,351 | 54 | 3 | 18,590 |
| | Grazing and fodder grass .. | .. | .. | 13,830 | .. | .. | 13,830 |
| | *Other produce.* | QRS. | | | | | |
| | Grass (tharbi, korai, etc.). .. | 1,206 | 9 | 457 | 173 | .. | 639 |
| | Tamarind, soapnuts, galnuts, nux-vomica, shekoi, etc. | 341 | 208 | 38,834 | .. | .. | 39,042 |
| | Horns, honey, wax, resin, gum, skins, etc. | 8 | 30 | 696 | .. | .. | 726 |
| | Tangedu, etc., barks and fibres. | 316 | 345 | 62,994 | 12 | .. | 63,351 |
| | Stone, gravel, earth, etc. .. | 2,476 | 4 | 1,889 | .. | .. | 1,893 |
| | Leaves for platters .. .. | .. | .. | 241 | .. | .. | 241 |
| | Date and palmyra leaves, stalks, etc. | 316 | 6 | 259 | 226 | .. | 491 |
| | Manure leaves and thorns .. | .. | .. | 173 | .. | .. | 173 |
| | Miscellaneous including tree-tapping and tree owner's fees. | 35 | 178 | 45,680 | .. | .. | 45,808 |
| | Total minor produce .. | 4,698 | 730 | 1,51,223 | 411 | .. | 1,52,364 |
| | Total, Unreserved lands .. | .. | 912 | 1,83,404 | 465 | 3 | 1,84,784 |

## Outturn of minor forest produce during the year 1918–19—*cont.*

| Circle. | Description of produce. | Produce removed or utilized | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government agency. | | By purchasers. | By free grantees. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| | *Abstract for the circle.* | NO. | RS. | RS. | RS. | RS. | RS. |
| Northern Circle—*cont.* | Bamboos in number .. .. | 1,030,044 | 22,792 | 86,936 | 334 | 64 | 1,10,126 |
| | Grazing and fodder grass .. | .. | .. | 1,16,522 | 13,547 | 1,138 | 1,31,207 |
| | Other produce in quarters .. | 87,052 | 46,154 | 2,73,895 | 559 | 23,571 | 3,44,179 |
| | Grand total, Northern Circle .. | .. | (*a*)68,946 | (*b*) 4,77,353 | 14,440 | 24,773 | 5,85,512 |
| Central Circle .. | Bamboos .. .. .. .. | NO. 20,096 | 545 | 24,537 | 78 | .. | 25,160 |
| | Grazing and fodder grass .. | .. | .. | 3,61,393 | 185 | 130 | 3,61,708 |
| | Manure leaves, thorns, etc. .. | 1,007 | .. | 9,485 | .. | .. | 9,485 |
| | Thatching grass, korai, etc. .. | 4,238 | 253 | 5,351 | 40 | .. | 5,644 |
| | Hay .. .. .. .. | .. | 41,629 | .. | .. | .. | 41,629 |
| | Tamarind, soapnut, gallnut, nuxvomica, etc., minor produce. | 5,788 | 5,484 | 40,575 | .. | .. | 46,059 |
| | Horns, honey wax, gum, etc. | 44 | 574 | 4,910 | .. | .. | 5,484 |
| | Tangedu, rela, etc., barks .. | 1,439 | 1,089 | 2,55,204 | .. | .. | 2,56,293 |
| | Mica, stone gravel, etc. .. | 120 | .. | 6,534 | 43 | .. | 6,577 |
| | Date, palmyra leaves .. .. | .. | .. | 2,043 | 360 | .. | 2,403 |
| | Miscellaneous, including tree-owners' fees. | 1,355 | 4,821 | 1,12,246 | 12 | .. | 1,17,079 |
| | Total .. | 13,991 | 53,850 | 4,36,348 | 455 | .. | 4,90,653 |
| | Grand total .. | .. | 54,395 | 8,22,278 | 718 | 130 | 8,77,521 |
| Southern Circle .. | Bamboos .. .. .. .. | NO. 7,325 | 711 | 1,31,625 | 246 | .. | 1,32,582 |
| | Grazing and fodder grass .. | QRS. 29,502 | 12,274 | 2,10,888 | 3,402 | .. | 2,26,564 |
| | Grass (thatch, korai, etc.) .. | 886 | 3 | 5,636 | 13 | .. | 5,652 |
| | Dammer, cardamoms, etc. .. | 1 | 12 | 5,444 | .. | .. | 5,456 |
| | Tamarind, soapnuts, gallnuts, etc. | 522 | 2,865 | 26,663 | .. | .. | 29,528 |
| | Avaram, vembadam, etc., barks. | 7,968 | 3,247 | 1,22,067 | .. | .. | 1,25,314 |
| | Stones, gravel and earth .. | 3,520 | 6 | 12,624 | 140 | .. | 12,770 |
| | Manure leaves, thorns, etc. .. | .. | .. | 3,921 | .. | .. | 3,921 |
| | Horns, honey, wax, gum, etc. .. | 157 | 1,004 | 6,824 | .. | .. | 7,828 |
| | Date, palmyra leaves, etc. .. | .. | .. | 567 | 33 | .. | 600 |
| | Miscellaneous, including tree-tapping fees. | 4,052 | 1,875 | 83,003 | 34 | 926 | 85,838 |
| | Total .. | 56,608 | 9,012 | 2,6[illegible],749 | 220 | 926 | 2,76,907 |
| | Grand total .. | .. | 21,997 | 6,09,262 | 3,868 | 926 | 6,36,053 |
| | *Reserved forests.* | | | | | | |
| Western Circle .. | Bamboos in number .. .. | 98,251 | 3,929 | 33,197 | 35 | .. | 37,161 |
| | Grazing and fodder grass .. | .. | .. | 1,46,896 | 1,025 | .. | 1,47,921 |

NOTE.—This return shows the outturn or demand accrued during the year as per heading but Form No. 80 shows actual collections. Form No. 77 will not therefore agree with Form No. 80.

(*a*) Excludes Rs. 5,290 belonging to the Parlakimedi Maliahs.
(*b*) Excludes Rs. 13,398 belonging to the Parlakimedi Maliahs.

## Outturn of minor forest produce during the year 1918-19—*cont.*

| Circle. | Description of produce. | Produce removed or utilized | | | | | |
|---|---|---|---|---|---|---|---|
| | | By Government agency. | | By purchasers. | By free grants. | By right-holders. | Total. |
| | | Quantity. | Value. | Value. | Value. | Value. | Value. |
| Western Circle—*cont.* | *Other produce.* | QRS. | RS. | RS. | RS. | RS. | RS. |
| | Grass (thatch, korai, etc.) .. | .. | .. | 492 | 1,739 | .. | 2,231 |
| | Dammers, turmeric, pepper, cardamoms, etc. | .. | .. | 5,224 | .. | .. | 5,224 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoi, etc. | .. | .. | 11,915 | .. | .. | 11,915 |
| | Horns, honey, wax, gums, resin, skin, etc. | 424 | 3,290 | 203 | .. | .. | 3,493 |
| | Avaram, vembadam, etc., barks and fibres. | 1,560 | 8,004 | 11,140 | .. | .. | 14,144 |
| | Stones, earth, gravel, etc. .. | .. | 16 | 482 | 80 | .. | 578 |
| | Manure leaves, thorns, etc. .. | .. | .. | 2,052 | 2 | .. | 2,054 |
| | Date and palmyra leaves .. | .. | .. | 1,864 | .. | .. | 1,864 |
| | Miscellaneous .. .. .. | 186 | 1,569 | 16,201 | .. | .. | 17,770 |
| | Total .. | 2,170 | 7,879 | 49,573 | 1,821 | .. | 59,273 |
| | *Leased forests.* | | | | | | |
| | Bamboos in number .. .. | 297,878 | 10,891 | 105 | .. | .. | 10,996 |
| | Grazing and fodder grass .. | .. | .. | 196 | 85 | .. | 281 |
| | *Other produce.* | QRS. | | | | | |
| | Grass (thatch, korai, etc.) .. | .. | .. | 28 | .. | .. | 28 |
| | Horns, honey, wax, gums, resin, skins, etc. | 52 | 300 | .. | .. | .. | 300 |
| | Stones, earth, gravel, etc. .. | .. | .. | .. | 66 | .. | 66 |
| | Miscellaneous .. .. .. | .. | .. | 78 | .. | .. | 78 |
| | Total .. | 52 | 300 | 106 | 66 | .. | 472 |
| | *Unreserved forests.* | NOS. | | | | | |
| | Bamboos in number .. .. | 860 | 13 | 255 | 3 | .. | 271 |
| | Grazing and fodder grass .. | QRS. 86,908 | 32,591 | .. | .. | .. | 32,591 |
| | *Other produce.* | QRS. | | | | | |
| | Catechu .. .. .. .. | 767 | 7,191 | .. | .. | .. | 7,191 |
| | Grass (thatch, korai, etc.) .. | .. | .. | .. | .. | .. | .. |
| | Dammers, turmeric, pepper, cardamoms, etc. | .. | .. | 50 | .. | .. | 50 |
| | Tamarind, soapnuts, gallnuts, nux-vomica, sheakoi, etc. | .. | .. | 4,893 | .. | .. | 4,893 |
| | Avaram, vembadam, etc., barks and fibres. | 1 | 6 | 13 | .. | .. | 19 |
| | Stones, gravel, earth, etc. .. | .. | .. | 611 | .. | .. | 611 |
| | Manure leaves, thorns, etc. .. | .. | .. | .. | .. | .. | .. |
| | Date and palmyra leaves .. | .. | .. | 12 | .. | .. | 12 |
| | Miscellaneous .. .. .. | .. | .. | 7,627 | 10 | .. | 7,637 |
| | Total .. | 768 | 7,197 | 13,206 | 10 | .. | 20,413 |
| | *Abstract for the Circle.* | NOS. | | | | | |
| | Bamboos in number .. .. | 396,989 | 14,833 | 33,557 | 38 | .. | 48,428 |
| | Grazing and fodder grass .. | QRS. 86,908 | 32,591 | 1,47,092 | 1,110 | .. | 1,80,793 |
| | Other produce .. .. | 2,990 | 15,376 | 62,885 | 1,897 | .. | 80,158 |
| | Grand total, Western Circle .. | .. | 62,800 | 2,43,534 | 3,045 | .. | 3,09,379 |
| | Total, Presidency, Bamboos .. | NO. 1,454,454 | 38,881 | 2,76,655 | 696 | 64 | 3,16,296 |
| | Grazing and fodder-grass .. | .. | 44,865 | 8,35,895 | 18,244 | 1,268 | 9,00,272 |
| | Other produce .. .. .. | .. | 1,24,392 | 10,39,877 | 3,131 | 24,497 | 11,91,897 |
| | Grand total, Presidency .. | .. | 2,08,138 | 21,52,427 | 22,071 | 25,829 | 24,08,465 |

## ANNUAL FORM No. 78.

*Forest Department, Madras Presidency.*

**Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1918–19.**

| Name of district. | Balance at commencement of the year in forest and sale depots. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depots. |
|---|---|---|---|---|---|
| **TIMBER (IN THOUSANDS OF CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | 10 | 88 | 98 | 23 | 70 |
| Vizagapatam | .. | 3 | 3 | 2 | 1 |
| Godavari, Upper | 2 | 42 | 44 | 38<br>(a) 5 | 1 |
| Do. Lower | 2 | 5 | 7 | ..<br>(a) 6 | 1 |
| Kurnool, East | 1 | 10 | 11 | 10 | 1 |
| Do. South | 7 | 6 | 13 | 11 | 2 |
| Do. West | 23 | 15 | 38 | 34 | 4 |
| Total .. | (a) 45 | (b) 169 | (c) 214 | (d) 134 | (e) 80 |
| *Central Circle.* | | | | | |
| Bellary | .. | .. | .. | .. | .. |
| Anantapur | .. | .. | .. | .. | .. |
| Guntur | 1 | 6 | 7 | 2 | 5 |
| Cuddapah, North | .. | 1 | 1 | 1 | .. |
| Do. South | .. | 2 | 2 | 2 | .. |
| Do. West | 1 | 1 | 2 | 2 | .. |
| Nellore | .. | .. | .. | .. | .. |
| Chingleput | .. | 1 | 1 | 1 | .. |
| Chittoor | .. | 1 | 1 | 1 | .. |
| Total .. | 2 | 12 | 14 | 9 | 5 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | 3 | 3 | .. | 3 |
| Do. South | 1 | 4 | 5 | 3 | 2 |
| Do. West | 4 | 8 | 12 | 8 | 4 |
| South Arcot, | .. | 4 | 4 | 4 | .. |
| Salem, North | 1 | 6 | 7 | 6 | 1 |
| Do. South | 1 | 2 | 3 | 3 | .. |
| Trichinopoly | 1 | 2 | 3 | 2 | 1 |
| Madura | .. | 2 | 2 | 1 | 1 |
| Tinnevelly | 1 | 1 | 2 | 2 | .. |
| Total .. | 9 | 32 | 41 | 29 | 12 |
| *Western Circle.* | | | | | |
| Mangalore, North | 3 | 21 | 24 | 15<br>(b) 1 | 8 |
| Do. South | 18 | 88 | 106 | 27<br>(a) 1<br>(b) 3 | 75 |
| Malabar, North | 42 | 119 | 161 | 142<br>(b) 2 | 17 |
| Do. South | 395 | 322 | 717 | 245<br>(a) 1<br>(b) 1 | 470 |
| The Nilgiris | 2 | 81 | 83 | 77 | 6 |
| Kollegal | 1 | 2 | 3 | 1 | 2 |
| Coimbatore, North | 12 | 4 | 16 | 13 | 3 |
| Do. Central | 2 | 8 | 10 | 5<br>(b) 2 | 3 |
| Do. South | 193<br>(c) 6 | 30 | 229 | 74<br>(a) 23<br>(b) 3 | 129 |
| Total .. | 674 | 675 | 1,349 | 636 | 718 |
| Grand total, Presidency .. | 730 | 888 | 1,618 | 808 | 810 |

(a) Excludes 814 cubic feet belonging to Parlakimedi Maiiams.
(b) Do. 1,592 do. do. do.
(c) Do. 2,406 do. do. do.
(d) Do. 1,798 do. do. do.
(e) Do. 608 do. do. do.

## Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1918-19—*cont.*

| Name of district. | Balance at commencement of the year in forest and sale depots. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depots. |
|---|---|---|---|---|---|
| **FUEL (IN THOUSANDS OF CUBIC FEET).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam | 6 | 32 | 38 | 15 | 23 |
| Vizagapatam | 3 | 6 | 9 | 8 | 1 |
| Godavari, Upper | 6 | 7 | 13 | 11 | 2 |
| Do. Lower | .. | 18 | 18 | 18 | .. |
| Kistna | 1 | 1 | 2 | 2 | .. |
| Kurnool, East | 11 | 19 | 30 | 30 | .. |
| Do. South | 16 | 16 | 32 | 13 | 19 |
| Do. West | 55 | 248 | 303 | 260 | 43 |
| Total .. | (a) 98 | (b) 347 | (c) 445 | (d) 357 | (e) 88 |
| *Central Circle.* | | | | | |
| Bellary | 2 | 4 | 6 | 6 | .. |
| Anantapur | .. | .. | .. | .. | .. |
| Guntur | .. | 3 | 3 | 3 | .. |
| Cuddapah, North | 2 | .. | 2 | 2 | .. |
| Do. South | .. | 1 | 1 | 1 | .. |
| Do. West | .. | 21 | 21 | 21 | .. |
| Nellore | .. | 40 | 40 | 3 | 37 |
| Chingleput | 2 | 7 | 9 | 8 | 1 |
| Chittoor | .. | 6 | 6 | 6 | .. |
| Total .. | 6 | 82 | 88 | 50 | 38 |
| *Southern Circle.* | | | | | |
| Vellore, North | .. | 2 | 2 | 2 | .. |
| Do. South | 1 | 9 | 10 | 10 | .. |
| Do. West | .. | 1 | 1 | 1 | .. |
| South Arcot, | .. | 3 | 3 | 2 | 1 |
| Salem, North | .. | 1 | 1 | 1 | .. |
| Do. South | .. | 3 | 3 | 3 | .. |
| Trichinopoly | 2 | 2 | 4 | 4 | .. |
| Madura | .. | 1 | 1 | 1 | .. |
| Tinnevelly | 10 | 21 | 31 | 29 | 2 |
| Total .. | 13 | 43 | 56 | 53 | 3 |
| *Western Circle.* | | | | | |
| Mangalore, North | 94 | 130 | 224 | 114<br>(a) 7<br>(b) 1 | 102 |
| Do. South | 117 | 126 | 243 | 74<br>(a) 6 | 163 |
| Malabar, South | 7 | 2 | 9 | 2<br>(a) 6<br>(b) 1 | .. |
| The Nilgiris | 158 | 520 | 678 | 448<br>(a) 12<br>(b) 3 | 215 |
| Coimbatore, North | .. | 5 | 5 | (b) 5 | .. |
| Do. Central | 4 | 33 | 37 | 36<br>(b) 1 | .. |
| Total .. | 380 | 816 | 1 9 6 | 716 | 480 |
| Grand total, Presidency .. | 497 | 1,288 | 1,785 | 1,176 | 664 |

(a) Excludes 14,100 cubic feet belonging to the Parlakimedi Maliahs.
(b) Do. 19,800 do. do. do.
(c) Do. 33,900 do. do. do.
(d) Do. 30,400 do. do.
(e) Do. 3,500 do. do.

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1918-19—*cont.*

| Name of district. | Balance at commencement of the year in forest and sale depots. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depots |
|---|---|---|---|---|---|
| **BAMBOOS (NUMBER).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam .. .. .. .. .. | 40 | 29,840 | 29,880 | 29,880 | .. |
| Vizagapatam .. .. .. .. | .. | 1,941 | 1,941 | 162<br>(a) 1,639 | 140 |
| Godavari, Upper .. .. .. .. | .. | 9,885 | 9,885 | ..<br>(a) 9,885 | .. |
| Do. Lower .. .. .. .. | 1,812 | 22,970 | 24,782 | ..<br>(a) 18,232 | 6,550 |
| Kurnool, East .. .. .. .. | 46,476 | 72,922 | 119,398 | 104,239 | 15,159 |
| Do. South .. .. .. .. | .. | 1,130 | 1,130 | ..<br>(a) 810 | 320 |
| Do. West .. .. .. .. | 68,557 | 891,356 | 959,913 | 906,865<br>(a) 900 | 52,148 |
| Total .. | 116,885 | (a) 1,030,044 | (b) 1,146,929 | (c) 1,072,612 | (d) 74,317 |
| *Central Circle.* | | | | | |
| Bellary .. .. .. .. .. | .. | .. | .. | .. | .. |
| Anantapur .. .. .. .. .. | .. | .. | .. | .. | .. |
| Guntur .. .. .. .. .. | .. | .. | .. | .. | .. |
| Cuddapah, North .. .. .. .. | 2,000 | 1,577 | 3,577 | 3,361 | 216 |
| Do. South .. .. .. .. | 52 | 12,050 | 12,102 | 9,136 | 2,966 |
| Do. West .. .. .. .. | 800 | 3,800 | 4,600 | 4,150 | 450 |
| Nellore .. .. .. .. .. | .. | .. | .. | .. | .. |
| Chingleput .. .. .. .. .. | .. | 69 | 69 | 69 | .. |
| Chittoor .. .. .. .. .. | 880 | 2,600 | 3,480 | 3,480 | .. |
| Total .. | 3,732 | 20,096 | 23,828 | 20,196 | 3,632 |
| *Southern Circle.* | | | | | |
| Vellore, North .. .. .. .. | 186 | 362 | 548 | 548 | .. |
| Do. South .. .. .. .. | .. | .. | .. | .. | .. |
| Do. West .. .. .. .. | .. | 1,240 | 1,240 | 1,240 | .. |
| South Arcot, .. .. .. .. | .. | 2,293 | 2,293 | 2,293 | .. |
| Salem, North .. .. .. .. | 2 | 1,824 | 1,826 | 1,592 | 234 |
| Do. South .. .. .. .. | .. | 50 | 50 | .. | 50 |
| Trichinopoly .. .. .. .. .. | 25 | .. | 25 | .. | 25 |
| Madura .. .. .. .. .. | .. | 7 | 7 | 7 | .. |
| Tinnevelly .. .. .. .. .. | .. | 1,549 | 1,549 | 1,186 | 363 |
| Total .. | 213 | 7,325 | 7,538 | 6,866 | 672 |
| *Western Circle.* | | | | | |
| Mangalore, North .. .. .. | 224 | 5,848 | 6,072 | 311<br>(b) 940 | 4,821 |
| Do. South .. .. .. .. | 495 | 8,352 | 8,847 | 1,331<br>(b) 2,661 | 4,855 |
| Malabar, North .. .. .. .. | 700 | 1,857 | 2,557 | (b) 2,557 | .. |
| Do. South .. .. .. .. | 51,443 | 379,603 | 431,046 | 157,688<br>(a) 21,954<br>(b) 3,282 | 248,122 |
| Kollegal .. .. .. .. .. | .. | 584 | 584 | 284<br>(b) 300 | .. |
| Coimbatore, North .. .. .. .. | 245 | 745 | 990 | 634<br>(b) 356 | .. |
| Do. Central .. .. .. | 125 | .. | 125 | (a) 125 | .. |
| Total .. | 53,232 | 396,989 | 450,221 | 192,423 | 257,798 |
| Grand total, Presidency .. | 174,062 | 1,454,454 | 1,625,516 | 1,292,097 | 336,419 |

(a) Excludes 12,562 bamboos belonging to the Parlakimedi Maliahs.
(b) Do. do. do. do. do.
(c) Do. 1,538 do. do. do.
(d) Do. 11,024 do. do. do.

## Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1918-19—*cont.*

| Name of district. | Balance at commencement of the year in forest and sale depots. | Received during the year. | Total. | Disposed of during the year. | Balance in hand at close of the year in forest and sale depots. |
|---|---|---|---|---|---|
| **MINOR PRODUCE (QUARTERS OF 28 LB.).** | | | | | |
| *Northern Circle.* | | | | | |
| Ganjam * | 1,311 | 8,508 | 9,819 | 9,815 | 4 |
| Vizagapatam | 92 | 375 | 467 | 463 | 4 |
| Godavari, Upper | 39,135 | 8,845 | 47,980 | 3,082<br>(a) 5,848<br>(b) 36,580 | 2,470 |
| Do. Lower | .. | 3,571 | 3,571 | 90<br>(a) 2,887 | 594 |
| Kistna | 50 | 501 | 551 | 473 | 78 |
| Kurnool, East | 8,956 | 46,492 | 55,448 | 53,808 | 1,640 |
| Do. South | .. | 8,093 | 8,093 | 8,001 | 92 |
| Do. West | 14,625 | 10,667 | 25,292 | 15,283<br>(a) 780<br>(b) 461 | 8,768 |
| Total .. | 64,169 | 87,052 | 151,221 | 137,571 | 13,650 |
| *Central Circle.* | | | | | |
| Bellary | 82 | 107 | 189 | 92 | 97 |
| Anantapur | 101,181 | 725 | 101,906 | 101,666 | 240 |
| Guntur | 3,437 | 953 | 4,390 | 4,063 | 327 |
| Cuddapah, North | 16,488 | 266 | 16,754 | 16,632 | 122 |
| Do. South | 16,083 | 4,190 | 20,273 | 19,000 | 1,273 |
| Do. West | 23,340 | 478 | 23,818 | 23,445 | 373 |
| Nellore | 1,945 | 6,846 | 8,791 | 3,465 | 5,326 |
| Chingleput | 67 | 120 | 187 | 128 | 59 |
| Chittoor | 5,468 | 306 | 5,774 | 5,677 | 97 |
| Total | 168,091 | 13,991 | 182,082 | 174,168 | 7,914 |
| *Southern Circle.* | | | | | |
| Vellore, North | 1,401 | 37,984 | 39,385 | 39,217 | 168 |
| Do. South | 1,657<br>(a) — 1,377 | 218 | 498 | 238 | 260 |
| Do. West | 1,493<br>(b) + 107 | 8,617 | 10,110<br>(b) + 107 | 8,893 | 1,217<br>(b) + 107 |
| South Arcot, | 570 | 3,053 | 3,623 | 2,582 | 1,041 |
| Salem, North | 176 | 441 | 617 | 488 | 129 |
| Do. South | 15,006 | 2,040 | 17,046 | 17,046 | .. |
| Trichinopoly | 39 | 149 | 188 | 42 | 146 |
| Madura | 37 | 125 | 162 | 61 | 101 |
| Tinnevelly | 67 | 3,981 | 4,048 | 4,008 | 40 |
| Total .. | 20,446<br>(a) — 1,377 | 56,608<br>(b) + 107 | 75,677<br>(b) + 107 | 72,575 | 3,102<br>(b) + 107 |
| *Western Circle.* | | | | | |
| Mangalore, North | (c) 14,597 | 39,280 | 53,877 | 52,236 | 1,641 |
| Do. South | 41,267 | 48,768 | 90,035 | 77,486<br>(a) 2,660<br>(b) 641 | 9,248 |
| Malabar, North | 143 | 3 | 146 | 146 | .. |
| Do. South | (d) | (d) | (d) | .. | (d) |
| The Nilgiris | 28 | 149 | 177 | 149<br>(a) 1<br>(b) 4 | 23 |
| Kollegal | 365 | 85 | 450 | 261<br>(a) 6 | 183 |
| Coimbatore, North | 96 | 1,492 | 1,588 | 1,190<br>(a) 8<br>(b) 59 | 331 |
| Do. Central | 249 | 118 | 367 | 366 | 1 |
| Do. South | (d) | 3 | 3 | 3 | (d) |
| Total .. | 56,745 | 89,898 | 146,643 | 135,216 | 11,427 |
| Grand total, Presidency .. | 308,074 | 247,656 | 555,730 | 519,530 | 36,200 |

(a) Written off the accounts.
(b) Used departmentally.
(c) Excess found at the inspection of depots.
(d) Less than one quarter.
(e) Revised figure furnished by the District Forest Officer.

* Excludes 3 quarters of Sarsaparella, balance at the commencement of the year and disposed of during the year; 8 quarters of Sundargundi received during the year; and 25,600 quarters of Myrabolams received and disposed of during the year.

## ANNUAL FORM No. 79.

*Forest Department, Madras Presidency.*

Statement showing the value of timber and other produce at sale depots for the year 1918-19.

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Northern Circle.* | | | Rs. | | | Rs. | Rs. | Rs. |
| Ganjam (i) .. | Timber .. .. | .. | (a) 4,503 | (b) 4,934 | .. | (c) 19,794 | (d) 24,059 | 19,125 | .. |
| | Fuel .. .. | .. | (e) 57 | (f) 12 | .. | (g) .. | (h) .. | .. | 12 |
| | Minor produce .. | Qr. 1,178 | .. | 582 | .. | .. | .. | .. | 582 |
| Vizagapatam. | Timber .. .. | .. | 25 | 2 | .. | 794 | 80 | 78 | .. |
| | Fuel .. .. | .. | 2,981 | 150 | .. | 1,325 | 66 | .. | 84 |
| | Minor produce .. | Qr. 92 | .. | 21 | Qr. 4 | .. | 36 | 15 | .. |
| Kurnool, South. | Timber .. .. | .. | 7,114 | 4,699 | .. | 1,950 | 966 | .. | 3,733 |
| | Fuel .. .. | .. | 15,400 | 644 | .. | 19,193 | 711 | 67 | .. |
| Kurnool, West. | Fuel .. .. | .. | 179 | 39 | .. | 179 | 39 | .. | .. |
| | *Central Circle.* | | | | | | | | |
| Nellore .. | Timber .. .. | .. | .. | .. | 17 | 47 | 47 | 47 | .. |
| | Fuel .. .. | .. | .. | .. | .. | 36,725 | 4,591 | 4,591 | .. |
| | Minor forest produce. | Mds. 1,493 | .. | 403 | 5,326 | .. | 6,081 | 5,678 | .. |
| | *Southern Circle.* | | | | | | | | |
| Vellore, North. | Timber .. .. | .. | 237 | 260 | .. | 2,514 | 314 | 54 | .. |
| | Fuel .. .. | .. | .. | .. | .. | 140 | 9 | 9 | .. |
| | Bamboos .. | 186 | .. | 1 | .. | .. | .. | .. | 1 |
| | Minor produce .. | Qrs. 1,401 | .. | 2,993 | Qrs. 168 | .. | 89 | .. | 2,904 |
| Vellore, South. | Timber .. .. | .. | 40 | 1,850 | .. | 64 | 2,149 | 299 | .. |
| | Minor produce .. | Qrs. 150 | .. | 135 | Qr. 1 | .. | 1 | .. | 134 |
| Vellore, West. | Timber .. | .. | 3,268 | 1,45,860 | .. | 2,910 | 1,03,812 | .. | 42,048 |
| | Minor produce .. | .. | .. | .. | Qrs. 120 | .. | 2,395 | 2,395 | .. |
| South Arcot. | .... | .. | .. | .. | .. | .. | .. | .. | .. |
| Salem, North. | Timber .. .. | .. | 823 | 2,723 | .. | 758 | 1,758 | .. | 965 |
| | Bamboos .. | 2 | .. | 1 | 234 | .. | 117 | 116 | .. |
| | Minor produce .. | Qrs. 176 | .. | 382 | Rs. 129 | .. | 241 | .. | 141 |
| Salem, South. | Timber .. .. | .. | 582 | 3,015 | .. | 313 | 268 | .. | 2,747 |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. .. | .. | .. | .. | No. 50 | .. | 1 | 1 | .. |
| | Minor produce .. | Qrs. 15,006 | .. | 5,627 | .. | .. | .. | .. | 5,627 |
| Trichinopoly. | Timber .. .. | .. | 587 | 4,756 | .. | 308 | 557 | .. | 4,199 |
| | Fuel .. .. | .. | 2,000 | 125 | .. | .. | .. | .. | 125 |
| | Bamboos .. | No. 25 | .. | 6 | 25 | .. | 6 | .. | .. |
| | Minor produce .. | Qrs. 39 | .. | 202 | .. | .. | .. | .. | 202 |
| Madura .. | Timber .. .. | .. | 441 | 128 | .. | 669 | 193 | 65 | .. |
| | Fuel .. .. | .. | 30 | 2 | .. | 80 | 5 | 3 | .. |
| | Minor produce .. | Qrs. 37 | .. | 193 | Qrs. 101 | .. | 518 | 325 | .. |
| Tinnevelly .. | Timber .. .. | .. | 853 | 364 | .. | 106 | 11 | 353 | .. |
| | Fuel .. .. | .. | 9,924 | 203 | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | No. 363 | .. | 34 | 34 | .. |
| | Minor produce .. | Qrs. 67 | .. | 156 | Qrs. 40 | .. | 259 | 103 | .. |

(a) Excludes 814 cubic feet belonging to Parlakimedi Maliahs.
(b) Do. Rs. 610 being value of (a) belonging to Parlakimedi Maliahs.
(c) Do. 608 cubic feet belonging to Parlakimedi Maliahs.
(d) Do. Rs. 625 being value of (c) belonging to Parlakimedi Maliahs.
(e) Do. 14,100 cubic feet belonging to Parlakimedi Maliahs.
(f) Do. Rs. 352 being value of (e) belonging to Parlakimedi Maliahs.
(g) Do. 3,500 cubic feet belonging to Parlakimedi Maliahs.
(h) Do. Rs. 87 being value of (g) belonging to Parlakimedi Maliahs.
(i) Do. 11,024 bamboos (value Rs. 661) belonging to the Parlakimedi Maliahs.

## Statement showing the value of timber and other produce at sale depots for the year 1918-19—*cont.*

| District. | Description of timber or produce. | On hand at commencement of the year. | | | On hand at close of the year. | | | Difference in value. | |
|---|---|---|---|---|---|---|---|---|---|
| | | Number. | Cubic feet. | Value. | Number. | Cubic feet. | Value. | In favour of the year. | Against the year. |
| | *Southern Circle*—cont. | | | Rs. | | | Rs. | Rs. | Rs. |
| Southern Circle. | Timber .. .. | .. | 6,831 | 1,58,956 | .. | 7,633 | 1,09,062 | .. | 49,894 |
| | Fuel .. .. | .. | 9,954 | 330 | .. | 220 | 14 | .. | 316 |
| | Bamboos .. | No. 213 | .. | 8 | No. 672 | .. | 158 | 150 | .. |
| | Minor produce .. | Qrs. 16,876 | .. | 9,688 | Qrs. 559 | .. | 3,503 | .. | 6,185 |
| | Total .. | .. | .. | 1,68,982 | .. | .. | 1,12,737 | .. | 56,245 |
| | *Western Circle.* | | | | | | | | |
| Mangalore, North. | Timber .. .. | .. | 227 | 123 | .. | 2,044 | 2,548 | 2,420 | .. |
| | Bamboos .. | 174 | .. | 17 | 4,521 | .. | 540 | 523 | .. |
| Malabar, South. | Timber .. .. | .. | 25,422 | 36,350 | .. | .. | .. | .. | 36,350 |
| | Fuel .. .. | .. | 282 | 56 | .. | 8 | 2 | .. | 54 |
| | Bamboos .. | 568 | .. | 2 | 450 | .. | 2 | .. | .. |
| The Nilgiris. | Timber .. .. | .. | 2,383 | 8,048 | .. | 5,569 | 12,346 | 4,303 | .. |
| | Fuel .. .. | .. | 10,320 | 1,178 | .. | 4,653 | 511 | .. | 667 |
| | Minor produce .. | Qrs. 28 | .. | 220 | Qrs. 23 | .. | 884 | 164 | .. |
| Kollegal .. | Timber .. .. | .. | 768 | 192 | .. | 1,928 | 934 | 742 | . |
| | Minor produce .. | Qrs. 288 | .. | 576 | .. | 183 | 366 | .. | 210 |
| Coimbatore, North. | Timber .. .. | .. | 12,061 | 5,29,538 | .. | 3,543 | 1,05,954 | .. | 4,23,584 |
| | Minor produce .. | Qrs. 96 | .. | 15 | Qrs. 331 | .. | 49 | 34 | .. |
| Coimbatore, South. | Timber .. .. | .. | 5,932 | 7,065 | .. | 9,447 | 15,254 | 8,189 | .. |
| | Minor produce .. | Qrs. 15 | .. | 8 | .. * | .. | 3 | .. | 5 |
| | | | | Abstract. | | | | | |
| Northern Circle. | Timber .. .. | .. | 11,642 | 9,635 | .. | 22,538 | 25,105 | 15,470 | .. |
| | Fuel .. .. | .. | 18,617 | 845 | .. | 20,697 | 816 | .. | 29 |
| | Minor produce .. | Qr. 1,270 | .. | 603 | Qr. 4 | .. | 36 | .. | 567 |
| | Total value .. | .. | .. | 11,083 | .. | .. | 25,957 | 14,874 | .. |
| Central Circle. | Timber .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Fuel .. .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Bamboos .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | Minor produce .. | Mds. * 2,213 | .. | 1,049 | Mds. 3,846 | .. | 3,745 | 2,696 | .. |
| Southern Circle. | Timber .. .. | .. | 7,707 | 1,69,327 | .. | 6,831 | 1,58,956 | .. | 10,371 |
| | Fuel .. .. | .. | 345 | 26 | .. | 9,954 | 330 | 304 | .. |
| | Bamboos .. | 50 | .. | 3 | 218 | .. | 8 | 5 | .. |
| | Minor produce .. | Mds. 135 | .. | 105 | Mds. 16,876 | .. | 9,688 | 9,583 | .. |
| | Total value .. | .. | .. | 1,69,461 | .. | .. | 1,68,983 | .. | 479 |
| Western Circle. | Timber .. .. | .. | 46,793 | 5,81,316 | .. | 22,531 | 1,37,036 | .. | 4,44,280 |
| | Fuel .. .. | .. | 10,602 | 1,234 | .. | 4,561 | 513 | .. | 721 |
| | Bamboos .. | 742 | .. | 19 | 4,971 | .. | 542 | 523 | .. |
| | Minor produce .. | Qrs. 427 | .. | 819 | Qrs. 354 | .. | 802 | .. | 17 |
| | Total value .. | .. | .. | 5,83,388 | .. | .. | 1,38,893 | . | 4,44,495 |
| | Grand total, Presidency. | .. | .. | 7,64,981 | .. | .. | 3,87,577 | .. | 4,27,404 |

* Less than one quarter.

ANNUAL FORM No. 80.

*Forest Department, Madras Presidency.*

Summary of revenue of the different district, for the year 1918–19.

ANNUAL

*Forest Department,*

Summary of revenue of the different districts

| Head of account. | Northern Circle | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool, West. | Total. |
| *Receipts.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | 39,504 | 1,072 | 24,452 | 105 | 104 | 3,296 | 3,564 | 10,629 | 82,726 |
| (*b*) Firewood and charcoal .. | 52 | 862 | 63 | 512 | 1,187 | 72 | 1,617 | 25 | 4,340 | 8,730 |
| (*c*) Bamboos .. .. .. | .. | 8 | .. | .. | .. | .. | 1,672 | .. | 18,728 | 20,408 |
| (*d*) Sandalwood .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce. | .. | 906 | 49 | 1,285 | 177 | 68 | 5,222 | .. | 18,379 | 26,086 |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | | | | |
| (*a*) Timber .. .. .. | 13 | 9,286 | 1,187 | 1,676 | 15,987 | 3,771 | 897 | 2,535 | 1,095 | 36,447 |
| (*b*) Firewood and charcoal .. | 3 | | 7,888 | 365 | 50,069 | 10,255 | 621 | 8,594 + 533 | 4,005 | 1,05,308 |
| (*c*) Bamboos .. .. .. | .. | 5,047 | 12,895 | 2,390 | 42,737 | 3,785 | 1,787 | 10,931 | 344 | 86,916 |
| (*d*) Grazing and fodder grass.. | .. | 9,597 | 4,219 | 8,013 | 13,022 | 14,760 | 29,384 | 11,854 — 1,773 | 27,456 | 1,16,522 |
| (*e*) Other produce .. .. | 22,291 | 1,377 | 16,498 | 2,814 | 42,959 | 7,062 | 2,017 | 9,805 + 1,240 | 13,085 | 1,19,148 |
| (*f*) Rents for trees tapped .. | .. | 1,242 | 2,164 | .. | 3,363 | 12,637 | 848 | 2,877 | 10,534 | 33,665 |
| (*g*) Other items .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*h*) Commutation fees .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| III. Confiscated drift and waif-wood .. | .. | 255 | 116 | 1,869 | 5,854 | 245 | 79 | 502 | 1,472 | 10,392 |
| IV. Revenue from forest not managed by Government— | | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | | |
| (*a*) Fines and forfeitures .. | .. | 2,163 | 1,928 | 465 | 4,414 | 3,094 | 2,587 | 8,107 | 5,519 | 28,277 |
| (*b*) Other sources .. .. .. | 462 | 1,641 | 672 | 652 | 7,821 | 2,411 | 2,382 | 2,055 | 2,434 | 20,530 |
| Total, Receipts .. | 22,821 | (*k*)94,863 | 48,751 | 51,493 | 1,87,695 | 58,254 | 52,409 | 60,849 | 1,18,020 | 6,95,155 |

| Budget heads. | Southern Circle. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Direction. | Forest Engineer. | Vellore, North. | Vellore, South. | Vellore, West. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. |
| *Receipts.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | 28 | 2 | .. | 61 | .. | 2,427 | 80 | 9 | 42 |
| (*b*) Firewood and charcoal .. | .. | .. | 38 | 184 | 27 | 128 | 89 | 2 | 186 | 70 |
| (*c*) Bamboos .. .. .. | .. | .. | 24 | .. | .. | 78 | 235 | .. | .. | .. |
| (*d*) Sandalwood .. .. | 2,61,397 | .. | 5 | 17,282 | 54,967 | .. | .. | .. | .. | .. |
| (*e*) Grass and other minor produce. | 381 | .. | 14,665 | 4 | 9 | 649 | 5 | 2,371 | 43 | 225 |
| II. Timber and other produce removed from the forests by consumers or purchasers— | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | .. | 5,907 | 2,448 | 1,223 | 3,320 | 6,314 | 4,397 | 9,416 | 19,613 |
| (*b*) Firewood and charcoal .. | 165 | .. | 20,924 | 10,836 | 1,766 | 99,434 | 21,175 | 4,324 | 42,299 | 55,758 |
| (*c*) Bamboos .. .. .. | .. | .. | 13,248 | 40,971 | 12,911 | 269 | 21,519 | 31,282 | 9,511 | 3,016 |
| (*d*) Grazing and fodder grass .. | .. | .. | 21,838 | 24,296 | 22,552 | 22,292 | 40,410 | 32,902 | 14,792 | 22,371 |
| (*e*) Other produce .. .. | 56,806 | .. | 16,885 | 8,335 | 6,163 | 15,983 | 22,383 | 11,650 | 16,549 | 15,436 |
| (*f*) Rents for trees tapped .. | .. | .. | 7,618 | 1,159 | 616 | 3,092 | 1,842 | 204 | 10 | .. |
| (*g*) Other items .. .. | .. | .. | .. | .. | .. | 29 | 1,449 | .. | .. | .. |
| (*h*) Commutation fees .. .. | .. | .. | .. | .. | .. | .. | .. | 2,988 | .. | .. |
| III. Confiscated drift and waif-wood .. | .. | .. | 129 | 50 | 70 | 103 | 158 | 167 | 191 | 1,235 |
| IV. Revenue from forest not managed by Government— | | | | | | | | | | |
| (*a*) Revenue from shared and private forests. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | | | | | |
| (*a*) Fines and forfeitures .. | ... | .. | 7,851 | 5,570 | 4,889 | 8,985 | 6,071 | 6,599 | 7,847 | 6,921 |
| (*b*) Other sources .. .. .. | 100 | 961 | 1,232 | 545 | 377 | 763 | 2,422 | 5,538 | 652 | 7,074 |
| Total, Receipts .. | 3,18,849 | 989 | 1,13,366 | 1,11,680 | 1,05,681 | 1,55,125 | 1,26,499 | 1,02,504 | 1,01,505 | 1,31,761 |

NOTE.—Revenue under *Direction* should be allotted as follows :—

I. (*d*) South Vellore (Rs. 74,613), West Vellore (Rs. 59,012), North Salem (Rs. 55,735), South Salem (Rs. 34,628), Trichinopoly (Rs. 37,409).

I. (*e*) South Arcot, (Rs. 381).

II. (*b*) South Arcot (Rs. 165).

II. (*c*) North Vellore (Rs. 3,700), South Vellore (Rs. 5,350), West Vellore (Rs. 3,602), South Arcot (Rs. 1,827), North Salem (Rs. 12,828), South Salem (Rs. 5,464) Trichinopoly (Rs. 3,596), Madura (Rs. 20,000), Tinnevelly (Rs 439).

V. (*b*) *Direction* (Rs. 10), Forest Engineer (Rs. 65), South Vellore (Rs. 20), West Vellore (Rs. 1), Madura (Rs. 4).

NOTE.—The revenue under *Direction* is distributed as follows :—

II. (*e*) *Vizagapatam*, Rs. 406.
*Godāvari Upper*, Rs. 110.
,, *Lower*, Rs. 1,948.
*Kistna*, Rs. 2,522.
*Kurnool East*, Rs. 4,249.
,, *South*, Rs. 5,838.
,, *West*, Rs. 7,2·8.

V. (*b*) *Direction* Rs. 36.
*Vizagapatam*, Re. 1.
*Kurnool West*, Rs. 425.

* *Rectification as per details furnished by the District Forest Officer.*

(*k*) Excludes Rs. 30,840 belonging to Parlakimedi Maliahs.

FORM No. 80.
*Madras Presidency.*
for the year 1918-19.

Central Circle.

| Direction. | Bellary. | Anantapur. | Guntur. | Cuddapah, North. | Cuddapah, South. | Cuddapah, West. | Nellore. | Chingleput. | Chittoor. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| .. | 17 | .. | 165 | .. | 712 | 96 | 5 | 2 | 46 | 983 |
| .. | 184 | 20 | .. | 12 | 22 | 334 | 44 | 475 | 281 | 1,372 |
| .. | .. | .. | .. | .. | 14 | .. | .. | .. | 4 | 18 |
| .. | .. | .. | .. | .. | 40 | .. | .. | .. | 42 | 82 |
| .. | 210 | 12,182 | 1,112 | 4,877 | 11,192 | 29,603 | 6,004 | .. | 118 | 65,298 |
| .. | 411 | 12,202 | 1,217 | 4,889 | 11,980 | 30,033 | 6,053 | 477 | 491 | 67,753 |
| .. | 7,755 | 18,306 | 6,681 | 2,811 | 10,534 | 12,940 | 6,775 | 2,631 | 12,181 | 80,614 |
| .. | 16,498 | 5,416 | 37,214 | 7,820 | 6,887 | 4,349 | 38,855 | 17,223 | 9,402 | 1,43,664 |
| .. | 623 | 1,055 | .. | 5,195 | 2,970 | 1,790 | 225 | 515 | 12,540 | 24,913 |
| .. | 34,114 | 50,094 | 79,897 | 16,345 | 6,676 | 22,045 | 92,472 | 23,988 | 22,298 | 3,47,929 |
| .. | 60,174 | 1,01,893 | 17,299 | 11,352 | 14,093 | 28,643 | — 44,525 | 9,748 | 37,491 | 2,36,188 |
| .. | 37,279 | 17,703 | 5,755 | 1,345 | 2,635 | 3,007 | 6,469 | 4,355 | 5,272 | 83,820 |
| .. | .. | .. | .. | .. | 100 | .. | .. | .. | .. | 100 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| .. | 1,56,443 | 1 94,467 | 1,46,846 | 44,868 | 43,895 | 72,774 | 1,00,271 | 58,460 | 99,184 | 9,17,208 |
| .. | 102 | 254 | 272 | 718 | 87 | 303 | 470 | 185 | 146 | 2,537 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| .. | 7,268 | 8,242 | 20,800 | 3,648 | 3,686 | 5,169 | 10,934 | 4,968 | 7,920 | 72,635 |
| 41 | 2,104 | 716 | 3,390 | 518 | 512 | 1,710 | 11,493 | 342 | 910 | 21,736 |
| 41 | 9,372 | 8,958 | 24,190 | 4,166 | 4,198 | 6,879 | 22,427 | 5,310 | 8,830 | 94,371 |
| 41 | 1,66,328 | 2,15,881 | 1,72,525 | 54,641 | 60,160 | 1,09,989 | 1,29,221 | 64,432 | 1,08,651 | 10,31,869 |

Western Circle.

| Tinnevelly. | Total. | Direction. | North Mangalore. | South Mangalore. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working Plan Office. | Forest Engineer. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| 183 | 2,832 | 978 | 5,436 | 15,334 | 89,932 | 3,62,100 | * 48,264 | 172 | * 281 | 2,288 | 74,747 | .. | .. | 5,99,532 |
| 1.042 | 1,766 | .. | 3.422 | 9,819 | .. | 271 | 57,029 | .. | .. | 879 | .. | .. | .. | 71,420 |
| 131 | 468 | .. | 88 | 62 | .. | 12,226 | .. | 31 | 68 | .. | .. | .. | .. | 12.475 |
| 10 | 3,33,661 | 2,67,905 | 6,888 | 1,833 | .. | ... | 42 | .. | 7,244 | .. | .. | .. | .. | 2,83,912 |
| 37 | 18,389 | 340 | 18,413 | 27,584 | 2 | 21 | 415 | 72 | 345 | 1,734 | .. | .. | .. | 48,926 |
| 3,131 | 55,769 | .. | 28,337 | 11,780 | 1,718 | 4,505 | 1,699 | 217 | 6,903 | 5,980 | 13,610 | .. | .. | 74,749 |
| 1,04,897 | 3,61,578 | .. | 16,315 | 3,188 | 930 | 3 | 2,084 | 247 | 23,600 | 83,206 | 18,345 | .. | .. | 1,47,918 |
| 1,189 | 1,33,916 | .. | 1,650 | 1,824 | 233 | 325 | 1,383 | 960 | 16,975 | 7,374 | 2,645 | .. | .. | 33,369 |
| 6,434 | 2,10,887 | .. | 3,970 | 5,962 | 4,508 | .. | 11,067 | 38,089† | 64,107 | 12,637 | 6,720 | .. | .. | 1,47,000 |
| 25,252 | 1,95,442 | 6,175 | 5,088 | 18,859 | 4,410 | 3,044 | 1,347 | 4,736 | 14,683 | 11,394 | 1,234 | .. | .. | 71,020 |
| .. | 14,541 | .. | 1,465 | 604 | .. | .. | .. | 71 | .. | 1 | .. | .. | .. | 2,141 |
| 2,940 | 4,418 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| .. | 2,988 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 195 | 2,298 | .. | 2,406 | 1,652 | .. | 167 | 42 | 37 | 123 | 130 | 172 | .. | .. | 4,729 |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 5,919 | 60,652 | .. | 4,907 | 3,076 | 530 | 1,288 | 828 | 1,568 | 9,701 | 8,692 | 4,145 | .. | .. | 34,730 |
| 2,949 | 22,613 | 89,089 | 1,140 | 9,906 | 11,762 | ‡ 35,044 | 7,996 | 1,900 | 3,481 | 4,006 | 20,497 | 9 | 516 | 1,85,346 |
| 1,54,809 | 14,22,218 | 3,64,487 | 99,525 | 1,11,423 | 1,14,025 | 4,18,989 | 1,32,196 | 48,100 | 1,47,461 | 1,38,321 | 1,42,215 | 9 | 516 | 17,17,267 |

The Revenue under *Direction* is distributed as follows :—
I. (*a*) *North Malabar*, Rs. 701 and *South Coimbatore*, Rs. 277 ; I (*d*) *Kollegal*, Rs. 69,925 and *North Coimbatore*, Rs. 1,97,980 ; I (*e*) *The Nilgiris*, Rs. 340.
II. (*e*) *Kollegal*, Rs. 3,143 ; *North Coimbatore*, Rs. 1,569 and *Central Coimbatore*, Rs. 1,463.
V. (*b*) *Direction*, Rs. 228 and *South Coimbatore*, Rs. 88,861.
* Includes Rs. 5,814 appertaining to *South Coimbatore*.
† Rs. 92 pertaining to II (*d*) has been wrongly credited to II (*a*).
‡ Includes Rs. 19,050 appertaining to *South Coimbatore* and Rs. 7,925 to *The Nilgiris*.

## Summary of expenditure of the different districts for the Forest year 1918–19.

| Head of account. | Direction. | Ganjam. | Vizagapatam. | Godavari, Upper. | Godavari, Lower. | Kistna. | Kurnool, East. | Kurnool, South. | Kurnool, West. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|
| *Northern Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Refunds and Drawbacks—Forest Refunds .. | .. | 325 | 440 | 277 | 331 | 1,305 | 199 | 359 | 4,471 | 7,707 |
| *A. Conservancy and Works.* | | | | | | | | | | |
| I. Timber, etc., removed by Government Agency— | | | | | | | | | | |
| (a) Timber .. .. .. .. .. | .. | 30,364 | 189 | 3,619 | .. | .. | 757 | 284 | 1,252 | 36,465 |
| (b) Firewood and charcoal .. .. | .. | 2 | 386 | 192 | 178 | .. | 483 | 13 | 1,909 | 3,163 |
| (c) Bamboos .. .. .. .. .. | .. | 5 | .. | .. | .. | .. | 1,246 | .. | 7,459 | 8,710 |
| (d) Sandalwood .. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (e) Grass and other minor produce .. | .. | 5,924 | 4 | 226 | 23 | .. | 2,123 | .. | 6,573 | 9,092 |
| II. Timber, etc., removed by consumers, etc. .. | .. | 143 | 5,110 | 1,135 | 16,687 | 2,490 | 7,415 | 7,770 | 13,680 | 60,211 |
| III. Confiscated forest produce, drift and waif-wood. | .. | 20 | .. | 161 | 760 | 15 | 1 | 5 | 102 | 1,064 |
| IV. Forests not managed by Government .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| V. Rent of leased forests, etc. .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| VI. Live-stock, stores, tools and plant .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (a) Purchase of cattle .. .. .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (b) Feed and keep of cattle .. .. .. | .. | 2,075 | 245 | 1,940 | .. | .. | .. | .. | 3,900 | 8,160 |
| (c) Stores, tools and plant .. .. .. | 25 | 1,191 | 210 | 1,775 | 5,753 | 845 | 126 | 54 | 83 | 10,062 |
| VII. Communications and buildings— | | | | | | | | | | |
| (a) Roads and bridges .. .. .. | .. | 3,856 | 592 | 671 | 1,657 | 381 | 5,868 | 1,423<br>* + 11 | 1,614 | 16,073 |
| (b) Buildings .. .. .. .. .. | 45 | 6,804 | 1,215 | 3,115<br>* — 6 | 4,917 | 389<br>* + 2 | 4,066 | 1,949<br>* — 11 | 1,722 | 24,207 |
| (c) Other works .. .. .. .. | .. | 192 | 1 | 50<br>* + 6 | .. | 223 | 1,235 | 338 | 146 | 2,191 |
| VIII. Organization, improvement and extension of forests— | | | | | | | | | | |
| (a) Demarcation .. .. .. .. | .. | 697 | 131 | 1,294 | 984 | 230 | 130 | .. | 467 | 3,933 |
| (b) Cost of forest settlements, compensation for land and rights. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (c) Surveys— | | | | | | | | | | |
| (1) Local surveys .. .. .. | .. | 417 | 60 | 879 | 1,892 | 813 | 958 | 144 | 641 | 5,804 |
| (2) Survey of India .. .. | .. | .. | .. | .. | .. | .. | 79 | .. | .. | 79 |
| (d) Working plans .. .. .. .. | .. | 252 | 311 | .. | .. | .. | .. | .. | .. | 563 |
| (e) Sowing and planting .. .. .. | 461 | 113 | 14 | 59 | 129 | 770 | 290 | 276 | 1,204 | 3,318 |
| (f) Protection from fire .. .. .. | .. | 5,603 | 1,226 | 7,243 | 5,496 | 1,175 | 8,523 | 10,290 | 7,329 | 46,885 |
| (g) Other works .. .. .. .. | .. | 9 | 76 | .. | 330 | 5,504 | 612 | 287 | 128 | 6,946 |
| IX. Miscellaneous— | | | | | | | | | | |
| (a) Law charges .. .. .. .. .. | .. | .. | 3 | .. | .. | .. | .. | 3 | 3 | 9 |
| (b) Other charges .. .. .. .. | .. | 20 | — 34 | 29 | 320 | 26 | .. | .. | .. | 359 |
| (c) Grain compensation allowance .. .. | 36 | 832 | 35 | .. | 15 | 95<br>* — 2 | 1,193 | 5 | 1,276 | 3,537 |
| Total, A. Conservancy and Works .. | 567 | (a)58,569 | 9,774 | 22,388 | 39,141 | 12,958 | 35,105 | 22,841 | 49,488 | 2,50,831 |
| *B. Establishment.* | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | |
| (a) Conservators .. .. .. .. .. | 18,099 | .. | .. | .. | .. | .. | .. | .. | .. | 18,099 |
| (b) Superior officers .. .. .. .. | 2,472 | 13,038 | 4,389 | 3,405 | 9,700 | 4,952 | 3,843 | 8,500 | 15,410 | 65,709 |
| (c) Subordinate establishment, etc. .. .. | 947 | 26,677 | 8,280 | 12,013 | 14,067 | 7,997 | 13,531 | 15,586 | 20,723 | 1,19,821 |
| (d) Office establishment .. .. .. | 8,884 | 8,584 | 3,909 | 5,201 | 6,718 | 3,701 | 5,435 | 6,117 | 8,249 | 56,798 |
| (e) Deputation, etc., allowances .. .. | 745 | 6,954 | 2,517 | 11 516 | 3,440 | 1,943 | 4,719 | 5,951 | 6,024 | 43,839 |
| (f) Grain compensation allowance .. .. | 90 | 1,384 | 421 | 767 | 948 | 580 | 745 | 929 | 1,106 | 6,970 |
| II. Travelling allowances— | | | | | | | | | | |
| (a) Conservators .. .. .. .. .. | 2,444 | .. | .. | .. | .. | .. | .. | 171 | 197 | 2,812 |
| (b) Superior officers .. .. .. .. | 490 | 3,464 | 1,614 | 1,239 | 1,242 | 1,546 | 1,603 | 1,287 | 2,416 | 14,811 |
| (c) Subordinate forest and depot establishments. | 359 | 8,816 | 2,158 | 4 333 | 5,140 | 2,606 | 5,114 | 5,238 | 6,703 | 40,767 |
| (d) Officer establishments .. .. .. | 1,088 | 2,377 | 731 | 1,826 | 2,168 | 992 | 2,085 | 1,678 | 2,232 | 15,177 |
| III. Contingencies— | | | | | | | | | | |
| (a) Contract items— | | | | | | | | | | |
| (1) Service postage and telegram charges. | 701 | 1,520 | 886 | 873 | 940 | 1,122 | 1,057 | 811 | 1,069 | 8,979 |
| (2) Other contract contingencies .. .. | 1,096 | 1,865 | 1,043 | 1,026 | 2,060 | 1,260 | 2,205 | 1,428 | 1,857 | 13,840 |
| (b) Non-Contract items— | | | | | | | | | | |
| (1) Rents, rates and taxes .. .. .. | 133 | 77 | 33 | 117 | 52 | 120 | 349 | 58 | 97 | 1,036 |
| (2) Sundries .. .. .. .. .. | 7,050 | 185 | 156 | 564 | 239 | 26 | 406 | 778 | 43 | 9,447 |
| Total, B. Establishment .. | 44,508 | (b) 74,941 | 26,167 | 42,880 | 46,714 | 26,845 | 41,392 | 48,532 | 66,126 | 4,18,105 |
| Grand Total of Expenditure A and B .. | 45,075 | 1,33,510 (c) | 35,941 | 65,268 | 58,855 | 39,803 | 76,497 | 71,373 | 1,15,614 | 6,68,936 |

* Rectification of audited figures as per details furnished by the District Forest Officers.

(a) Excludes Rs. 9,984 belonging to the Parlakimedi Maliahs.
(b) Do. 18,829 do. do.
(c) Do. 28,813 do. do.

## Summary of expenditure of the different districts for the Forest year 1918–19—*cont.*

| Budget heads. | Bellary. | Anantapur. | Guntur. | Cuddapah, North. | Cuddapah, South. | Cuddapah, West. | Nellore. | Chingleput. | Chittoor. | Direction. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Central Circle.* | | | | | | | | | | | |
| *A. Conservancy and Works.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | |
| (*a*) Timber | .. | .. | .. | .. | 57 | 8 | .. | .. | 2 | .. | 67 |
| (*b*) Firewood and charcoal | 23 | .. | .. | .. | .. | .. | 445 | 310 | .. | .. | 778 |
| (*c*) Bamboos | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Sandalwood | .. | .. | .. | .. | 1 | .. | .. | .. | 287 | .. | 288 |
| (*e*) Grass and other minor produce | .. | 1,877 | 127 | 599 | 4,544 | 5,325 | 4,007 | 25 | 419 | 325 | 8,160 |
| Total | 23 | 1,877 | 127 | 599 | 4,486 | 5,333 | 4,452 | 335 | 708 | 325 | 9,293 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | 2,378 | 2,199 | 2,761 | 6,366 | 6,385 | 5,224 | 2,175 | 2,353 | 3,073 | .. | 32,914 |
| III. Confiscated drift and waif-wood | .. | 1 | 7 | 40 | 2 | 20 | .. | .. | 8 | .. | 73 |
| V. Rent of leased forests and payments to share-holders in forests managed by Government. | 2,000 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2,000 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | |
| (*a*) Purchase of cattle | .. | .. | .. | .. | .. | .. | 16 | .. | .. | .. | 16 |
| (*b*) Feed and keep of cattle | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Stores, tools and plant | 1,205 | 258 | 255 | 302 | 205 | 920 | 1,838 | 201 | 1,402 | 102 | 6,688 |
| VII. Communications and buildings— | | | | | | | | | | | |
| (*a*) Roads and bridges | .. | 196 | 365 | 371 | 4,682 | 2,029 | 57 | 976 | 3,894 | .. | 12,570 |
| (*b*) Buildings | 1,163 | 2,360 | 3,263 | 2,851 | 7,738 | 4,102 | 2,826 | 3,652 | 5,488 | .. | 33,443 |
| (*c*) Other works | 1 | .. | 4 | 101 | 41 | 298 | 268 | 162 | 531 | .. | 1,406 |
| Total | 1,164 | 2,556 | 3,632 | 3,323 | 12,461 | 6,429 | 3,151 | 4,790 | 9,913 | .. | 47,419 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | |
| (*a*) Demarcation | 1,060 | 487 | 243 | 210 | 20 | 800 | 809 | 380 | 787 | .. | 4,796 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | .. | 276 | 78 | 600 | 480 | 396 | .. | .. | 1,830 |
| (*c*) Surveys — Local | 5 | .. | .. | .. | .. | .. | 377 | 367 | .. | 462 | 1,211 |
| (*c*) Surveys — India | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans | 42 | .. | .. | .. | .. | .. | .. | .. | .. | 1,000 | 1,042 |
| (*e*) Sowing and planting | 383 | 544 | 1,205 | 387 | 425 | 785 | 1,597 | 223 | 1,349 | .. | 6,898 |
| (*f*) Protection from fire | 1,334 | 3,731 | .. | 6,853 | 3,143 | 5,204 | 1,428 | 1,637 | 1,323 | .. | 24,653 |
| (*g*) Other works | 4,907 | 8,002 | 8,642 | 2,377 | 4,356 | 5,899 | 4,548 | 3,555 | 15,578 | .. | 57,864 |
| Total | 7,731 | 12,764 | 10,090 | 10,103 | 8,022 | 13,288 | 9,239 | 6,558 | 19,037 | 1,462 | 98,294 |
| IX. Miscellaneous— | | | | | | | | | | | |
| (*a*) Law charges | .. | .. | .. | 24 | 4 | .. | .. | .. | 24 | .. | 52 |
| (*b*) Other charges | | 50 | .. | 54 | 16 | 431 | 10 | 48 | 65 | 250 | 924 |
| Total | .. | 50 | .. | 78 | 20 | 431 | 10 | 48 | 89 | 250 | 976 |
| Grain compensation allowance | 21 | .. | 21 | .. | 21 | 21 | 48 | 37 | 4 | .. | 173 |
| Total, A. Conservancy and Works | 14,522 | 19,705 | 16,893 | 20,811 | 22,630 | 31,666 | 20,929 | 14,322 | 34,229 | 2,139 | 1,97,846 |
| Refunds | 4,506 | 1,242 | 426 | 111 | 31 | 82 | 230 | 706 | 1,912 | .. | 9,246 |
| *B. Establishments.* | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | |
| (*a*) Conservators | .. | .. | — | .. | .. | .. | .. | .. | .. | 24,703 | 24,703 |
| (*b*) Superior officers | 4,275 | 7,775 | 7,904 | 4,068 | 8,118 | 5,447 | 9,810 | 3,962 | 9,844 | 5,104 | 66,307 |
| (*c*) Subordinate Forest and Depot establishments. | 14,853 | 14,064 | 16,318 | 12,018 | 15,540 | 15,205 | 19,825 | 15,893 | 18,425 | 340 | 1,42,481 |
| (*d*) Office establishments, a permanent | 5,847 | 5,021 | 5,273 | 4,462 | 5,327 | 5,623 | 6,347 | 3,641 | 5,731 | 8,729 | 56,001 |
| (*e*) Deputation and other allowance | 4,057 | 3,802 | 3,417 | 3,361 | 2,664 | 3,737 | 4,916 | 4,745 | 4,546 | 625 | 35,870 |
| (*f*) Grain compensation allowance | 1,183 | 917 | 1,185 | 931 | 2,378 | 1,146 | 1,293 | 1,037 | 1,034 | 133 | 11,237 |
| II. Travelling allowances— | | | | | | | | | | | |
| (*a*) Conservators | — 1,400 | — 1,758 | — 1,507 | — 1 222 | — 1,701 | — 2,742 | — 1,869 | — 1,505 | — 2,190 | 1,997 | — 13,897 |
| (*b*) Superior officers | 1,923 | 1,747 | 1,661 | 1,623 | 2,339 | 2,072 | 2,875 | 1,815 | 2,186 | 772 | 19,013 |
| (*c*) Subordinate forest and depot establishments | 4,886 | 5,325 | 74,33 | 3,823 | 5,124 | 6,612 | 5,859 | 5,095 | 6,467 | 90 | 48,014 |
| (*d*) Office establishments | 988 | 1,179 | 55 | 681 | 1,673 | 1,045 | 1,274 | 1,038 | 1,523 | 1,133 | 11,289 |
| III. Contingencies— | | | | | | | | | | | |
| (*a*) Contract items— | | | | | | | | | | | |
| (1) Service postage and telegram charges. | 707 | 687 | 835 | 542 | 438 | 4 84 | 1,086 | 539 | 1,012 | 1,087 | 7,417 |
| (2) Other contract contingencies | 1,572 | 1,417 | 624 | 1,278 | 1,290 | 1,162 | 1,854 | 3,390 | 1,619 | 962 | 15,168 |
| (*b*) Non-contract items— | | | | | | | | | | | |
| (1) Rents, rates and taxes | | 140 | 95 | 32 | 95 | 115 | 131 | 591 | 102 | .. | 1,781 |
| (2) Sundries | | 154 | 119 | 163 | 440 | 56 | 173 | 234 | 260 | 5,324 | 7,073 |
| Grain compensation allowance | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total, B. Establishments | 39,521 | 40,470 | 41,412 | 31,760 | 48,725 | 39,962 | 53,574 | 40,475 | 50,559 | 50,999 | 4,32,457 |

## Summary of expenditure of the different districts for the Forest year 1918-19—*cont.*

| Budget heads. | Direction. | Forest Engineer. | Vellore, North. | Vellore, South. | Vellore, West. | Arcot, South. | Salem, North. | Salem, South. | Trichinopoly. | Madura. | Tinnevelly. | Working plans. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Southern Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Refunds and Drawbacks .. .. | .. | 100 | 2,373 | 5,650 | 3,545 | 771 | 129 | 376 | 1,643 | 611 | 101 | .. | 15,299 |
| *A. Conservancy and Works.* | | | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | | | |
| (*a*) Timber .. .. .. | .. | .. | .. | 11 | 96 | .. | 495 | .. | 621 | .. | 61 | .. | 1,284 |
| (*b*) Firewood and charcoal .. | .. | .. | 5 | 17 | .. | 22 | 56 | .. | .. | .. | 140 | .. | 240 |
| (*c*) Bamboos .. .. .. | .. | .. | 5 | .. | .. | 16 | 170 | .. | .. | .. | 56 | .. | 247 |
| (*d*) Sandalwood .. .. | .. | .. | 14 | 3,072 | 8,859 | 278 | 4,499 | 3,545 | 2,500 | .. | 349 | .. | 23,116 |
| (*e*) Grass and other minor produce. | .. | .. | 11,109 | — 435 | 243 | 43 | 6 | — 61 | 27 | 209 | 104 | .. | 11,245 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | .. | 2,010 | 1,160 | 1,029 | 1,098 | 1,778 | 3,576 | 647 | 2,925 | 4,240 | .. | 18,463 |
| III. Confiscated drift and waif-wood. | .. | .. | 6 | 1 | 2 | .. | 5 | 20 | 4 | 1 | .. | .. | 39 |
| V. Rent of leased forests and payments to share holders in forests managed by Government. | .. | .. | .. | .. | .. | .. | 28 | .. | .. | .. | .. | .. | 28 |
| VI. Livestock, stores, tools and plant— | | | | | | | | | | | | | |
| (*a*) Purchase of cattle .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*b*) Feed and keep of cattle .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*c*) Stores, tools and plant .. | 166 | 168 | 1,115 | 155 | 217 | 72 | 1,205 | 1,502 | 404 | 1,913 | 232 | 57 | 7,204 |
| VII. Communications and buildings— | | | | | | | | | | | | | |
| (*a*) Roads and bridges .. .. | .. | 47,749 | 2,714 | 190 | 1,927 | 98 | 1,348 | 702 | 669 | 14,085 | 3,829 | .. | 73,311 |
| (*b*) Buildings .. .. .. | .. | .. | 2,936 | 6,894 | 8,876 | 3,543 | 2,087 | 5,323 | 1,928 | 14,769 | 3,285 | .. | 49,641 |
| (*c*) Other works .. .. .. | .. | .. | 5 | 566 | 1,337 | 29 | 53 | 193 | 128 | 729 | 6 | .. | 3,046 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | | | |
| (*a*) Demarcation .. .. | .. | .. | 301 | — 1 | 359 | 8 | 275 | 369 | .. | 2,218 | — 159 | .. | 3,370 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | .. | 94 | 71 | .. | .. | 441 | .. | 270 | 618 | .. | .. | 1,494 |
| (*c*) Surveys .. { Local .. | | .. | 572 | .. | 476 | 374 | 100 | 848 | 537 | .. | .. | .. | 2,942 |
| (*c*) Surveys .. { India .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| (*d*) Working plans .. .. | .. | .. | .. | .. | 150 | .. | .. | .. | .. | .. | .. | 614 | 764 |
| (*e*) Sowing and planting .. | .. | .. | 3,658 | 554 | 57 | 97 | 225 | 3,020 | 34 | 1,588 | 945 | .. | 10,064 |
| (*f*) Protection from fire .. | .. | .. | 850 | 861 | 768 | 207 | 2,894 | 2,408 | 563 | 5,245 | 4,527 | .. | 18,323 |
| (*g*) Other works .. .. | .. | .. | 7,606 | 5,418 | 6,006 | 4,882 | 12,151 | 9,975 | 4,113 | 13,515 | 6,606 | .. | 70,272 |
| IX. Miscellaneous— | | | | | | | | | | | | | |
| (*a*) Law charges .. .. | .. | .. | .. | .. | .. | .. | .. | 5 | 4 | 6 | .. | .. | 15 |
| (*b*) Grain compensation allowance. | .. | .. | 83 | 16 | 18 | 29 | 15 | 18 | 18 | 67 | .. | .. | 264 |
| (*d*) Other charges.. .. .. | 36 | .. | 266 | —12 | 108 | 115 | 289 | 2,327 | 3 | 12 | 164 | .. | 3,308 |
| **Total, A.** Conservancy and Works .. | 237 | 47,917 | 33,349 | 18,538 | 30,414 | 10,911 | 28,118 | 33,770 | 12,470 | 57,900 | 24,385 | 671 | 2,98,680 |
| *B. Establishments.* | | | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 22,005 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 22,005 |
| (*b*) Superior officers .. .. | 1,465 | 4,764 | 9,622 | 10,718 | 5,319 | 9,095 | 11,063 | 9,060 | 4,700 | 15,149 | 9,537 | 2,034 | 92,526 |
| (*c*) Subordinate Forest and Depot establishments. | 930 | 2,982 | 10,852 | 9,739 | 9,797 | 8,289 | 18,740 | 16,555 | 11,185 | 20,033 | 15,412 | 1,092 | 1,25,606 |
| (*d*) Office establishments .. | 9,370 | 2,651 | 4,338 | 5,143 | 4,361 | 3,962 | 6,547 | 6,720 | 5,361 | 6,228 | 5,994 | 694 | 61,369 |
| (*e*) Deputation and special allowances. | 720 | 1,517 | 2,671 | 2,485 | 2,286 | 2,649 | 4,324 | 3,883 | 3,724 | 4,429 | 4,297 | 229 | 33,214 |
| (*f*) Grain compensation allowance. | 122 | 121 | 652 | 681 | 580 | 605 | 1,119 | 946 | 805 | 1,345 | 1,007 | 30 | 8,013 |
| II. Travelling allowances— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. .. | 2,244 | .. | .. | .. | 464 | .. | 125 | .. | .. | .. | 112 | .. | 2,945 |
| (*b*) Superior officers .. .. | 57 | 669 | 1,581 | 2,285 | 1,075 | 1,386 | 1,766 | 818 | 1,267 | 1,816 | 1,256 | 477 | 14,453 |
| (*c*) Subordinate forest and depot establishments. | 187 | 1,067 | 2,907 | 2,760 | 2,534 | 2,815 | 4,749 | 4,280 | 3,140 | 5,149 | 4,514 | 410 | 34,462 |
| (*d*) Office establishments .. .. | 1,208 | 297 | 806 | 650 | 390 | 576 | 798 | 673 | 466 | 1,309 | 1,057 | 87 | 8,317 |
| III. Contingencies— | | | | | | | | | | | | | |
| (*a*) Contract items— | | | | | | | | | | | | | |
| 1. Service postage and telegram charges. | 934 | .. | 863 | 876 | 620 | 846 | 1,279 | 755 | 1,043 | 1,010 | 877 | 52 | 9,155 |
| 2. Other contract contingencies. | 1,581 | .. | 757 | 911 | 1,184 | 1,059 | 1,322 | 1,762 | 814 | 1,135 | 1,708 | 107 | 12,340 |
| (*b*) Non-contract items— | | | | | | | | | | | | | |
| 1. Rents, rates and taxes .. | 5 | 450 | 108 | 206 | 118 | 15 | 37 | 39 | 29 | 229 | 201 | .. | 1,437 |
| 2. Sundries .. .. .. | 4,950 | 581 | 174 | 111 | .. | 47 | 88 | 132 | .. | 79 | 56 | 74 | 6,292 |
| Total, B. Establishments .. | 45,778 | 15,099 | 35,331 | 36,565 | 28,728 | 31,344 | 51,957 | 45,573 | 32,543 | 57,911 | 46,028 | 5,286 | 4,32,134 |
| Grand Total of Expenditure, A and B. | 46,015 | 63,016 | 68,680 | 55,103 | 59,142 | 42,255 | 80,075 | 79,343 | 45,004 | 1,15,811 | 70,413 | 5,957 | 7,30,814 |

Summary of expenditure of the different districts for the Forest year 1918-19—*cont.*

| Budget heads. | Direction. | North Mangalore. | South Mangalore. | North Malabar. | South Malabar. | The Nilgiris. | Kollegal. | North Coimbatore. | Central Coimbatore. | South Coimbatore. | Working-plans office. | Forest Engineer. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Western Circle.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Refunds and Drawbacks .. | .. | 26 | 720 | 149 | 884 | 215 | 291 | 372 | 455 | 582 | .. | .. | 3,694 |
| *A. Conservancy and Works.* | | | | | | | | | | | | | |
| I. Timber and other produce removed from the forests by Government Agency— | | | | | | | | | | | | | |
| (*a*) Timber .. .. | — 17 | 3,140 | 9,630 | 9,617 | 53,821 | 8,757 | 165 | 115 | 2,687 | 14,645 | .. | .. | 1,02,560 |
| (*b*) Firewood and charcoal. | .. | 2,142 | 6,929 | .. | .. | 41,763 | 232 | .. | 329 | — 11 | .. | .. | 51,384 |
| (*c*) Bamboos .. .. | .. | 245 | .. | .. | 24,912 | .. | 63 | 104 | .. | .. | .. | .. | 25,324 |
| (*d*) Sandalwood .. .. | .. | 436 | 146 | .. | .. | 96 | 1,109 | 3,582 | .. | .. | .. | .. | 5,369 |
| (*e*) Grass and other minor produce. | —340 | 33,130 | 20,440 | 28 | 1,553 | 430 | 47 | 560 | — 330 | 1 | .. | .. | 55,519 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | .. | 4,519 | 3,215 | 463 | 1,944 | 190 | 2,098 | 5,248 | 4,398 | 2,696 | .. | .. | 25,771 |
| III. Confiscated, drift and waif wood. | .. | 44 | 38 | 5 | 15 | .. | 5 | 11 | 1 | .. | .. | .. | 119 |
| V. Rent of leased forests and payment to shareholders in forests managed by Government. | .. | .. | .. | 33 | 2,064 | .. | .. | .. | .. | 2,500 | .. | .. | 4,597 |
| VI. Live-stock, stores, tools and plant— | | | | | | | | | | | | | |
| (*a*) Purchase of cattle .. | .. | .. | 4,185 | 3,304 | 4,184 | 1,132 | .. | .. | 1,157 | 8,842 | .. | .. | 22,804 |
| (*b*) Feed and keep of cattle. | 4 | .. | 7,155 | 11,925 | 38,528 | 23,269 | .. | .. | 2,417 | 35,543 | .. | .. | 1,13,841 |
| (*c*) Stores, tools and plant. | 598 | 158 | 44 | 627 | 3,481 | 1,243 | 40 | 393 | 632 | 18,032 | 58 | 168 | 25,474 |
| VII. Communications and buildings— | | | | | | | | | | | | | |
| (*a*) Roads and bridges .. | 6 | 1,571 | 1,953 | 2,579 | 3,391 | 7,213 | 2,902 | 8,392 | 6,085 | 7,332 | .. | 3,368 | 44,780 |
| (*b*) Buildings .. .. | 254 | 3,030 | 4,327 | 2,556 | 1,132 | 539 | 2,333 | 4,280 | 4,833 | 2,238 | .. | 1,024 | 26,546 |
| (*c*) Other works .. .. | .. | 511 | 297 | 3 | 1,186 | 387 | 244 | 506 | 141 | 548 | .. | .. | 3,823 |
| VIII. Demarcation, improvement and extension of forests— | | | | | | | | | | | | | |
| (*a*) Demarcation .. | .. | 197 | 681 | 1,320 | 759 | 906 | 597 | 1,274 | 750 | 37 | .. | .. | 6,521 |
| (*b*) Cost of Forest Settlement; compensation for land and rights. | .. | 764 | .. | .. | .. | 10,395 | .. | .. | .. | .. | .. | .. | 11,159 |
| (*c*) Surveys .. { Local .. | .. | .. | 123 | .. | 742 | 1,198 | 703 | 548 | 663 | 32 | .. | .. | 4,009 |
| { India .. | .. | .. | .. | .. | 255 | .. | .. | .. | .. | .. | .. | .. | 255 |
| (*d*) Working-plans .. | .. | .. | 20 | .. | 270 | 3 | .. | .. | .. | .. | 1,706 | .. | 1,999 |
| (*e*) Sowing and planting .. | 760 | 123 | 32 | 974 | 18,240 | 758 | 152 | 765 | 4,131 | 860 | .. | .. | 26,795 |
| (*f*) Protection from fire .. | .. | 1,749 | 2,875 | 5,899 | 4,637 | 4,152 | 2,892 | 1,342 | 6,239 | 2,595 | .. | .. | 32,380 |
| (*g*) Other works .. .. | .. | 117 | 1,111 | 2,431 | 2,536 | 1,920 | 3,555 | 11,255 | 18,688 | 4,721 | .. | .. | 46,334 |
| IX. Miscellaneous— | | | | | | | | | | | | | |
| (*a*) Law charges .. .. | .. | 9 | 5 | 305 | 2 | 11 | 150 | .. | .. | .. | .. | .. | 482 |
| (*b*) Grain compensation allowance. | .. | .. | .. | 18 | 79 | 57 | 31 | 168 | 21 | 83 | .. | .. | 457 |
| (*c*) Other charges .. .. | 261 | 260 | 702 | 59 | 345 | 4,931 | 2 | 812 | 433 | 1,234 | .. | .. | 9,039 |
| Total .. | 1,514 | 52,145 | 63,908 | 42,146 | 1,59,076 | 1,09,350 | 18,320 | 39,355 | 53,275 | 1,01,928 | 1,764 | 4,560 | 6,47,341 |
| *B. Establishments.* | | | | | | | | | | | | | |
| I. Salaries— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 21,636 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 21,636 |
| (*b*) Superior officers .. .. | 2,454 | 5,060 | 10,214 | 4,652 | 12,851 | 12,841 | 290 | 15,416 | 7,365 | 16,104 | 2,870 | 4,764 | 94,881 |
| (*c*) Subordinate Forest and Depot establishments. | 1,493 | 10,228 | 8,635 | 7,200 | 9,050 | 11,976 | 8,097 | 13,166 | 13,330 | 10,911 | 2,142 | 3,444 | 99,672 |
| (*d*) Office establishments .. | 8,307 | 4,164 | 4,395 | 3,972 | 5,063 | 4,547 | 3,524 | 5,387 | 4,353 | 6,479 | 1,377 | 2,188 | 53,756 |
| (*e*) Deputation and other allowances. | 819 | 3,582 | 3,391 | 10,560 | 1,804 | 12,294 | 3,600 | 6,076 | 4,779 | 3,600 | 3,243 | 1,638 | 55,386 |
| (*f*) Grain compensation allowance. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| II. Travelling allowances— | | | | | | | | | | | | | |
| (*a*) Conservators .. .. | 2,067 | .. | 100 | .. | 163 | .. | 100 | .. | .. | .. | .. | .. | 2,430 |
| (*b*) Superior officers .. .. | 100 | 1,482 | 1,840 | 1,725 | 2,732 | 2,886 | 50 | 2,034 | 1,838 | 3,557 | 907 | 669 | 19,820 |
| (*c*) Subordinate forest and depot establishments. | 709 | 2,950 | 3,623 | 2,401 | 3,498 | 3,124 | 2,123 | 3,480 | 4,403 | 2,731 | 1,030 | 1,068 | 31,140 |
| (*d*) Office establishments .. | 717 | 563 | 1,120 | 466 | 1,171 | 538 | 1,065 | 902 | 1,048 | 854 | 384 | 296 | 9,124 |
| III. Contingencies— | | | | | | | | | | | | | |
| (*a*) Contract items— | | | | | | | | | | | | | |
| (1) Service postage and telegram charges. | 685 | 1,170 | 1,290 | 605 | 808 | 1,075 | 711 | 930 | 613 | 1,210 | 85 | .. | 9,182 |
| (2) Other contract contingencies. | 1,724 | 1,098 | 1,439 | 869 | 1,282 | 1,045 | 1,848 | 1,335 | 964 | 801 | 65 | .. | 12,470 |
| (*b*) Non-contract items— | | | | | | | | | | | | | |
| (1) Rents, rates and taxes. | 79 | .. | 4 | 21 | 38 | 50 | 621 | 2 | 106 | 750 | .. | 450 | 2 14 |
| (2) Sundries .. .. | 4,767 | 46 | 203 | 73 | 400 | 138 | 74 | 296 | 101 | 351 | 27 | 434 | 6,910 |
| Total .. | 45,557 | 30,343 | 36,254 | 32,544 | 38,860 | 50,514 | 22,103 | 49,051 | 38,900 | 47,348 | 12,130 | 14,951 | 4,18,555 |

Summary of receipts and expenditure during 1918-19 for each circle and for the Presidency compiled in the Chief Conservator's office from the Conservators' statements.

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1918-19. | 1917-18. |
| RECEIPTS. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| I. Timber and other produce removed from the forests by Government agency— | | | | | | |
| (a) Timber .. .. .. | 82,726 | 983 | 2,832 | 5,99,532 | 6,86,073 | 6,44,109 |
| (b) Firewood and charcoal .. | 8,730 | 1,372 | 1,766 | 71,420 | 83,288 | 77,588 |
| (c) Bamboos .. .. .. | 20,408 | 18 | 468 | 12,475 | 33,369 | 17,115 |
| (d) Sandalwood .. .. | .. | 82 | 3,33,661 | 2,83,912 | 6,17,655 | 5,23,703 |
| (e) Grass and other minor produce. | 26,086 | 65,298 | 18,389 | 48,926 | 1,58,699 | 92,726 |
| Total, I .. | 1,37,950 | 67,753 | 3,57,116 | 10,16,265 | 15,79,084 | 13,55,241 |
| II. Timber and other produce removed from the forests by consumers, etc.— | | | | | | |
| (a) Timber .. .. .. | 36,447 | 80,614 | 55,769 | 74,749 | 2,47,579 | 3,11,635 |
| (b) Firewood and charcoal .. | 1,04,775 | 1,43,664 | 3,61,578 | 1,47,918 | 7,57,935 | 9,56,916 |
| (c) Bamboos .. .. .. | 86,916 | 24,913 | 1,33,916 | 33,369 | 2,79,114 | 3,07,595 |
| (d) Grazing and fodder grass.. | 1,18,295 | 3,47,929 | 2,10,887 | 1,47,000 | 8,24,111 | 7,39,674 |
| (e) Other produce .. .. | 1,17,908 | 2,36,168 | 1,95,442 | 71,020 | 6,20,538 | 10,86,572 |
| (f) Tree-owners' fees .. .. | 33,665 | 83,820 | 14,541 | 2,141 | 1,34,167 | 1,43,244 |
| (g) Other items .. .. | .. | 100 | 4,418 | .. | 4,518 | 1,374 |
| (h) Commutation fees .. .. | 10,392 | .. | 2,988 | .. | 13,380 | 1,594 |
| Total, II .. | 5,08,398 | 9,17,208 | 9,79,539 | 4,76,197 | 28,81,342 | 35,48,604 |
| III. Confiscated drift and waifwood .. | .. | 2,537 | 2,298 | 4,729 | 9,564 | 16,157 |
| IV. Revenue from forests not managed by Government. | .. | .. | .. | .. | .. | .. |
| V. Miscellaneous— | | | | | | |
| (a) Fines and forfeitures .. | 28,277 | 72,635 | 60,652 | 34,730 | 1,96,294 | 2,07,395 |
| (b) Other sources .. .. .. | 20,530 | 21,736 | 22,613 | 1,85,346 | 2,50,225 | 2,89,099 |
| Total, V .. | 48,807 | 94,371 | 83,265 | 2,20,076 | 4,46,519 | 4,96,494 |
| Grand Total, Receipts .. | 6,95,155 | 10,81,869 | 14,22,218 | 17,17,267 | 49,16,509 | 54,16,496 |
| EXPENDITURE. | | | | | | |
| I. Refunds and Drawbacks .. .. | 7,707 | 9,246 | 15,299 | 3,694 | 35,946 | 26,795 |
| *A. Conservancy and Works.* | | | | | | |
| I. Timber and other produce removed from the forests by Government agency— | | | | | | |
| (a) Timber .. .. .. | 36,465 | 67 | 1,284 | 1,02,560 | 1,40,376 | 70,845 |
| (b) Firewood and charcoal .. | 3,163 | 778 | 240 | 51,384 | 55,565 | 50,679 |
| (c) Bamboos .. .. .. | 8,710 | .. | 247 | 25,324 | 34,281 | 15,761 |
| (d) Sandalwood .. .. | .. | 288 | 23,116 | 5,369 | 28,773 | 39,213 |
| (e) Grass and other minor produce. | 9,092 | 8,160 | 11,245 | 55,619 | 84,016 | 1,82,803 |
| Total, A-I .. | 57,430 | 9,293 | 36,132 | 2,40,156 | 3,43,011 | 3,59,301 |
| II. Timber and other produce removed from the forests by consumers or purchasers. | 60,211 | 32,914 | 18,463 | 25,771 | 1,37,359 | 1,08,630 |
| III. Confiscated drift and waifwood .. | 1,064 | 73 | 39 | 119 | 1,295 | 1,990 |
| V. Rent of leased forests and payments to shareholders in forests managed by Government. | .. | 2,000 | 28 | 4,597 | 6,625 | 18,225 |
| VI. Live-stock, stores, tools and plant— | | | | | | |
| (a) Purchase of cattle .. | .. | 16 | .. | 22,804 | 22,820 | 12,424 |
| (b) Feed and keep of cattle .. | 8,160 | .. | .. | 1,13,841 | 1,22,001 | 80,635 |
| (c) Stores, tools and plant .. | 10,062 | 6,688 | 7,204 | 25,474 | 49,428 | 32,490 |
| Total, A-VI .. | 18,222 | 6,704 | 7,204 | 1,62,119 | 1,94,249 | 1,25,549 |
| VII. Communications and buildings— | | | | | | |
| (a) Roads and bridges .. | 16,073 | 12,570 | 73,311 | 44,780 | 1,46,734 | 1,54,776 |
| (b) Buildings .. .. .. | 24,207 | 33,443 | 49,641 | 26,546 | 1,33,837 | 1,15,927 |
| (c) Other works .. .. | 2,191 | 1,406 | 3,046 | 3,823 | 10,466 | 8,514 |
| Total, A-VII .. | 42,471 | 47,419 | 1,25,998 | 75,149 | 2,91,037 | 2,79,217 |

Summary of receipts and expenditure during 1918-19 for each circle and for the Presidency compiled in the Chief Conservator's office from the Conservators' statements—*cont.*

| Budget heads. | Northern Circle. | Central Circle. | Southern Circle. | Western Circle. | Grand total, Presidency. | |
|---|---|---|---|---|---|---|
| | | | | | 1918-19. | 1917-18. |
| EXPENDITURE—*cont.* | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| *A. Conservancy and Works*—cont. | | | | | | |
| VIII. Demarcation, etc.— | | | | | | |
| (*a*) Demarcation .. .. | 3,933 | 4,796 | 3,370 | 6,521 | 18,620 | 24,587 |
| (*b*) Cost of forest settlement; compensation for land and rights. | .. | 1,830 | 1,494 | 11,159 | 14,483 | 20,107 |
| (*c*) Surveys. (1) Local .. | 5,804 | 1,211 | 2,942 | 4,009 | 13,966 | 14,904 |
| (2) Imperial. | 79 | .. | .. | 255 | 334 | 7,995 |
| (*d*) Working-plans .. .. | 563 | 1,042 | 764 | 1,999 | 4,368 | 9,323 |
| (*e*) Sowing and planting .. | 3,318 | 6,898 | 10,064 | 26,795 | 47,075 | 34,910 |
| (*f*) Protection from fire .. | 46,885 | 24,653 | 18,323 | 32,380 | 1,22,241 | 1,21,156 |
| (*g*) Other works .. .. | 6,946 | 57,814 | 70,272 | 46,334 | 1,81,366 | 1,54,180 |
| Total, A-VIII .. | 67,528 | 98,244 | 1,07,229 | 1,29,452 | 4,02,453 | 3,87,162 |
| IX. Miscellaneous— | | | | | | |
| (*a*) Law charges .. .. | 9 | 52 | 15 | 482 | 558 | 1,334 |
| (*b*) Grain compensation allowance. | 3,537 | 173 | 264 | 457 | 4,431 | 1,719 |
| (*c*) Other charges .. .. | 359 | 924 | 3,308 | 9,039 | 13,630 | 24,387 |
| Total, A-IX .. | 3,905 | 1,149 | 3,587 | 9,978 | 18,619 | 27,440 |
| Total, A. Conservancy and Works, including Refunds and Drawbacks. | 2,58,538 | 2,07,042 | 3,13,979 | 6,51,035 | 14,30,594 | 13,34,309 |
| *B. Establishments.* | | | | | | |
| I. Salaries— | | | | | | |
| (*a*) Conservators .. .. | 18,099 | 24,703 | 22,005 | 21,636 | 86,443 | 84,583 |
| (*b*) Superior officers .. .. | 65,709 | 66,307 | 92,526 | 94,881 | 3,19,423 | 3,45,949 |
| (*c*) Subordinate establishments, etc. | 1,19,921 | 1,42,481 | 1,25,606 | 99,672 | 4,87,680 | 4,92,655 |
| (*d*) Office establishments .. | 56,798 | 56,001 | 61,369 | 53,756 | 2,27,924 | 2,39,799 |
| (*e*) Deputation and other allowance. | 43,839 | 35,870 | 33,214 | 55,380 | 1,68,303 | .. |
| (*f*) Grain compensation allowance. | 6,970 | 11,237 | 8,013 | .. | 26,220 | 41,677 |
| Total, B-I .. | 3,11,336 | 3,36,599 | 3,42,733 | 3,25,325 | 13,15,993 | 12,04,663 |
| II. Travelling allowances .. .. | 73,567 | 64,419 | 60,177 | 62,514 | 2,60,677 | 2,72,427 |
| III. Contingencies— | | | | | | |
| (*a*) Contract items— | | | | | | |
| (1) Service postage and telegram charges. | 3,979 | 7,417 | 9,155 | 9,182 | 34,733 | 30,554 |
| (2) Other contract items. | 13,840 | 15,168 | 12,340 | 12,470 | 53,818 | 45,288 |
| (*b*) Non-contract items— | | | | | | |
| (1) Rents, rates and taxes. | 1,036 | 1,781 | 1,437 | 2,148 | 6,402 | 6,282 |
| (2) Sundries .. .. | 9,447 | 7,073 | 6,292 | 6,910 | 29,722 | 26,073 |
| Total, B-III .. | 33,302 | 31,439 | 29,224 | 30,710 | 1,24,675 | 1,08,197 |
| Total, B. Establishments .. | 4,18,205 | 4,32,457 | 4,32,134 | 4,18,549 | 17,01,345 | 15,85,287 |
| Grand Total, Expenditure including Refunds and Drawbacks. | 6,76,743 | 6,39,499 | 7,46,113 | 10,69,584 | 31,31,939 | 29,19,596 |
| Surplus .. .. | 18,412 | 4,42,370 | 6,76,105 | 6,47,683 | 17,84,570 | 24,96,900 |
| Total .. | 6,95,155 | 10,81,869 | 14,22,218 | 17,17,267 | 49,16,509 | 54,16,496 |

## ANNUAL FORM No. 81.

*Forest Department, Madras Presidency.*

**Outstandings and liabilities on account of contractors and disbursers for the Forest year 1918–19.**

| District. | Department debtor. | | | Department creditor. | | | Balance due. | |
|---|---|---|---|---|---|---|---|---|
| | At commencement of year. | Recoveries in cash and value of supplies and work done during the year. | At close of year. | At commencement of year. | Payments made during year. | At close of year. | To department (outstandings). | By department (liabilities). |
| *Northern Circle.* | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| Direction, Northern Circle .. | .. | 496 11 6 | 496 11 6 | 24 7 6 | 579 5 11 | 603 13 5 | 107 1 11 | .. |
| Ganjam .. .. .. | .. | 1,29,580 9 3 | 1,29,580 9 3 | 4,896 5 6 | 1,30,799 13 1 | 1,35,696 2 7 | 6,115 9 4 | .. |
| Vizagapatam .. .. | .. | 27,501 4 4 | 27,501 4 4 | 363 8 7 | 27,624 8 1 | 27,988 0 8 | 486 12 4 | .. |
| Godavari, Upper .. .. | .. | 43,518 8 11 | 43,518 8 11 | 874 12 11 | 43,431 4 0 | 44,306 0 11 | 787 8 0 | .. |
| Do. Lower .. .. | .. | 70,835 9 11 | 70,835 9 11 | 1,153 6 9 | 71,085 14 8 | 72,239 5 5 | 1,403 11 6 | .. |
| Kistna .. .. .. | .. | 31,552 7 4 | 31,552 7 4 | 1,290 3 6 | 30,603 8 4 | 31,893 11 10 | 341 4 6 | .. |
| Kurnool, East .. .. | .. | 90,247 2 9 | 90,247 2 9 | 2,699 4 4 | 90,838 4 1 | 93,537 8 5 | 3,290 5 8 | .. |
| Do. South .. .. | .. | 67,222 1 4 | 67,222 1 4 | 2,418 1 0 | 66,557 13 5 | 68,975 14 5 | 1,753 13 1 | .. |
| Do. West .. .. | .. | 97,153 11 10 | 97,153 11 10 | 3,029 5 1 | 96,741 4 8 | 99,770 9 9 | 2,616 13 11 | .. |
| Golgonda Agency and Hill Madgole. | .. | 4,193 8 1 | 4,193 8 1 | 8 10 0 | 4,241 0 0 | 4,249 10 0 | 56 1 11 | .. |
| Total .. | .. | (a) 5,62,301 11 3 | (b) 5,62,301 11 3 | (c) 16,758 1 2 | (d) 5,82,502 12 3 | (e) 5,79,260 13 5 | (f) 16,959 2 2 | .. |
| *Central Circle.* | | | | | | | | |
| Direction, Central Circle .. | .. | 926 5 2 | 926 5 2 | 29 7 2 | 963 1 11 | 992 9 1 | 66 3 11 | .. |
| Guntur .. .. .. | .. | 43,280 13 7 | 43,280 13 7 | 637 12 7 | 43,190 15 5 | 43,828 12 0 | 547 14 5 | .. |
| Nellore .. .. .. | .. | 60,058 5 9 | 60,058 5 9 | 1,629 1 1 | 59,992 9 11 | 61,621 11 0 | 1,563 5 3 | .. |
| Cuddapah, North .. .. | .. | 49,106 13 5 | 49,106 13 5 | 687 6 0 | 49,316 3 11 | 50,003 9 11 | 896 12 6 | .. |
| Do. South .. .. | .. | 66,653 0 7 | 66,653 0 7 | 1,059 3 2 | 66,474 7 9 | 67,533 10 11 | 880 10 4 | .. |
| Do. West .. .. | .. | 65,204 11 11 | 65,204 11 11 | 1,870 3 6 | 64,673 5 6 | 66,543 9 0 | 1,338 13 1 | .. |
| Bellary .. .. .. .. | .. | 40,156 9 7 | 40,156 9 7 | 1,609 15 5 | 39,057 13 11 | 40,667 13 4 | 511 8 9 | .. |
| Anantapur .. .. .. | .. | 62,751 13 2 | 62,751 13 2 | 920 4 5 | 62,752 14 10 | 63,673 3 3 | 921 6 1 | .. |
| Chittoor .. .. .. | .. | 74,920 0 7 | 74,920 0 7 | 563 11 0 | 75,118 15 7 | 75,682 10 7 | 762 10 0 | .. |
| Chingleput .. .. .. | .. | 38,444 13 0 | 38,444 13 0 | 586 14 9 | 38,733 5 7 | 39,320 4 4 | 875 7 4 | .. |
| Total .. | .. | 5,01,503 6 9 | 5,01,503 6 9 | 9,593 15 1 | 5,00,273 14 4 | 5,09,867 13 5 | 8,364 6 8 | .. |
| *Southern Circle.* | | | | | | | | |
| Direction, Southern Circle .. | .. | 1,670 6 10 | 1,670 6 10 | 36 10 1 | 1,705 15 7 | 1,742 9 8 | 72 2 10 | .. |
| Vellore, North .. .. | .. | 68,365 3 1 | 68,365 3 1 | 1,282 12 11 | 68,379 4 7 | 69,662 1 6 | 1,296 14 5 | .. |
| Do. South .. .. | .. | 44,758 11 8 | 44,758 11 8 | 1,270 14 6 | 43,949 14 6 | 45,220 13 0 | 462 1 4 | .. |
| Do. West .. .. | .. | 60,794 11 2 | 60,794 11 2 | 1,728 6 9 | 60,209 14 10 | 61,938 5 7 | 1,143 10 5 | .. |
| Arcot, South .. .. .. | .. | 28,131 1 8 | 28,131 1 8 | 610 2 10 | 27,787 5 4 | 28,397 8 2 | 266 6 6 | .. |
| Salem, North .. .. .. | .. | 77,144 0 3 | 77,144 0 3 | 1,801 10 5 | 78,293 4 1 | 80,094 14 6 | 2,950 14 3 | .. |
| Do. South .. .. .. | .. | 73,101 6 2 | 73,101 6 2 | 1,754 14 5 | 73,256 8 3 | 75,011 6 8 | 1,910 0 6 | .. |
| Trichinopoly .. .. .. | .. | 40,031 15 0 | 40,031 15 0 | 928 4 3 | 39,982 8 3 | 40,910 12 6 | 878 13 6 | .. |
| Madura .. .. .. | .. | 112,591 15 1 | 1,12,591 15 1 | 2,646 12 5 | 1,12,747 5 3 | 1,15,394 1 8 | 2,802 2 7 | .. |
| Tinnevelly .. .. .. | .. | 61,740 5 10 | 61,740 5 10 | 3,232 2 1 | 60,862 5 1 | 64,094 7 2 | 2,354 1 4 | .. |
| Forest Engineer .. .. | .. | 8,111 8 3 | 8,111 8 3 | 650 2 3 | 8,172 12 1 | 8,822 14 4 | 711 6 1 | .. |
| Total .. | .. | 5,76,441 5 0 | 5,76,441 5 0 | 15,942 12 11 | 5,75,347 1 10 | 5,91,289 14 9 | 14,848 9 9 | .. |
| *Western Circle.* | | | | | | | | |
| Direction, Western Circle .. | .. | 1,697 10 6 | 1,697 10 6 | 37 14 11 | 1,733 12 2 | 1,771 11 1 | 74 0 7 | .. |
| The Nilgiris .. .. .. | .. | 1,13,501 2 1 | 1,13,501 2 1 | 4,542 2 0 | 1,14,409 9 2 | 1,18,951 11 2 | 5,450 9 1 | .. |
| North Coimbatore .. .. | .. | 80,169 0 3 | 80,169 0 3 | 2,413 0 10 | 81,846 4 10 | 84,259 5 8 | 4,090 5 5 | .. |
| Central do. .. .. | .. | 95,967 14 5 | 95,967 14 5 | 3,950 2 6 | 94,476 6 7 | 98,426 9 1 | 2,458 10 8 | .. |
| South do. .. .. | .. | 1,16,375 8 9 | 1,16,375 8 9 | 3,189 2 3 | 1,18,282 15 10 | 1,21,472 2 6 | 5,096 9 9 | .. |
| Kollegal .. .. .. | .. | 40,339 6 0 | 40,339 6 0 | 1,511 2 2 | 39,876 2 4 | 41,387 4 6 | 1,047 14 6 | .. |
| North Malabar .. .. | .. | 61,088 4 0 | 61,088 4 0 | 3,228 0 0 | 59,417 3 2 | 62,645 3 2 | 1,556 15 2 | .. |
| South do. .. .. | .. | 1,70,663 6 6 | 1,70,663 6 6 | 2,958 11 6 | 1,75,196 10 9 | 1,78,155 6 3 | 7,591 15 9 | .. |
| North Mangalore .. .. | .. | 58,952 14 2 | 58,952 14 2 | 1,064 15 0 | 59,112 12 2 | 60,177 11 2 | 1,224 13 0 | .. |
| South do. .. .. | .. | 94,574 10 4 | 94,574 10 4 | 2,327 10 5 | 96,581 12 1 | 97,909 6 6 | 3,334 12 2 | .. |
| Working Plans office .. .. | .. | 9,294 11 5 | 9,294 11 5 | 229 1 10 | 9,900 1 1 | 10,129 2 11 | 834 7 6 | .. |
| Total .. | .. | 8,42,524 8 5 | 8,42,524 8 5 | 25,451 15 10 | 8,49,833 10 2 | 8,75,285 10 0 | 32,761 1 7 | .. |
| Grand total, Presidency. .. | .. | 24,82,770 15 5 | 24,82,770 15 5 | 67,746 13 0 | 24,87,957 6 7 | 25,55,704 3 7 | 72,933 4 2 | .. |

(a) Excludes Rs. 20,187 belonging to Parlakimedi Maliahs.
(b) Do. 20,187 do. do.
(c) Do. 483 do. do.
(d) Do. 20,037 do. do.
(e) Do. 20,520 do. do.
(f) Do. 334 do. do.

ACCOUNTANT-GENERAL'S OFFICE,
MADRAS, 1st *September* 1919.

C. C. SWETENHAM,
*Deputy Accountant-General.*

## ANNUAL FORM No. 82.

*Forest Department, Madras Presidency.*

Revenue received and outstandings on account of revenue during 1918-19.

| District. | Particulars. | Outstandings at commencement of year. | Value of sales and other revenue during year. | Total. | Amount realized during year. | Balance due to the department at end of year. |
|---|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| *Northern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 22,821 0 0 | 22,821 0 0 | 22,821 0 0 | .. |
| Ganjam .. .. .. | Do. | 25,961 13 5 | (d) 74,652 11 8 | (d)1,00,614 9 1 | (e) 94,862 0 0 | (f) 5,751 9 1 |
| Visagapatam .. .. | Do. | 12,315 3 8 | 68,661 14 5 | 80,977 2 1 | 48,751 0 0 | 32,226 2 1 |
| Godavari, Upper .. .. | Do. | 81 9 0 | 62,886 5 1 | 62,967 14 1 | 51,493 0 0 | 11,474 14 1 |
| Do. Lower .. .. | Do. | 57,612 3 4 | 1,96,139 11 4 | 2,53,751 14 8 | 1,87,695 0 0 | 66,056 14 8 |
| Kistna .. .. .. | Do. | 2,703 12 4<br>(a)— 169 0 0 | 55,894 7 2 | 58,429 3 6 | 58,254 0 0 | 175 3 6 |
| Kurnool, East .. .. | Do. | 20,314 5 2<br>(a)—13,199 15 8 | 45,741 4 8 | 52,855 10 2 | 52,409 0 0<br>(b) 100 0 0 | 346 10 2 |
| Do. South .. .. | Do. | 30,674 10 8<br>(a)— 4,090 0 0 | 35,951 1 10 | 62,625 12 6 | 60,849 0 0<br>(b) 92 9 6 | 1,684 3 0 |
| Do. West .. .. | Do. | 2,512 8 0 | 1,16,040 8 0 | 1,18,553 0 0 | 1,18,020 0 0 | 533 0 0 |
| *Central Circle.* | Total .. | 1,52,176 1 7<br>(a)—17,368 15 8 | 6,78,789 0 2 | 8,13,596 2 1 | 6,95,155 0 0<br>(b) 192 9 6 | (c) 1,18,248 8 7 |
| Direction .. .. .. | Timber and other forest produce. | .. | 41 0 0 | 41 0 0 | 41 0 0 | .. |
| Bellary .. .. .. | Do. .. | 44,585 2 8 | 2,49,775 15 0 | 2,94,361 1 8 | 1,66,328 0 0<br>(a) 150 0 0<br>(b) 3,575 1 8 | 1,24,308 0 0 |
| Anantapur .. .. .. | Do. .. | 53,304 12 9 | 4,57,527 10 4 | 5,10,832 7 1 | 2,15,881 0 0<br>(c) 69 13 1<br>(d) 4 0 0 | 2,94,877 10 0 |
| Guntur .. .. .. | Do. | 18,337 4 0 | 1,72,796 9 4 | 1,91,133 13 4 | 1,72,525 0 0 | 18,608 13 4 |
| Cuddapah, North .. .. | Do. | 3,153 1 6 | 49,762 14 6 | 57,916 0 0 | 54,641 0 0 | 3,275 0 0 |
| Do. South .. .. | Do. | 26,652 15 4 | 56,522 8 6 | 82,175 7 10 | 60,160 0 0 | 22,015 7 10 |
| Do. West .. .. | Do. | 32,530 4 3 | 1,09,673 3 6 | 1,42,203 7 9 | 1,09,989 0 0 | 32,214 7 9 |
| Nellore .. .. .. | Do. .. | 1,20,317 6 0 | 1,00,536 15 7 | 2,20,854 5 7 | 1,29,221 0 0<br>(c) 1,409 14 1<br>64,432 0 0 | 90,223 7 6 |
| Chingleput .. .. .. | Do. .. | 19,760 2 0 | 62,655 10 0 | 82,415 12 0 | (a) 55 0 0<br>(c) 300 0 0 | 17,628 12 0 |
| Chittoor .. .. .. | Do. .. | 17,932 13 0 | 1,10,674 8 5 | 1,28,607 5 5 | 1,08,651 0 0<br>(a) 35 0 0<br>(c) 3 8 1 | 19,917 13 4 |
| | Total .. | 3,40,573 13 6 | 13,69,966 15 2 | 17,10,540 12 8 | 10,81,869 0 0<br>5,602 4 11 | 6,23,069 7 9 |
| *Southern Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 3,18,849 0 0 | 3,18,849 0 0 | 3,18,849 0 0 | .. |
| Vellore, North .. .. | Do. | 16,480 12 9 | 1,32,260 14 8 | 1,48,741 11 5 | 1,13,366 0 0 | 35,375 11 5 |
| Do. South .. .. | Do. | 32,596 5 9 | 1,97,788 8 7 | 2,30,384 14 4 | 1,11,680 0 0 | 1,18,704 14 4 |
| Do. West .. .. | Do. | 8,231 5 7 | 1,17,341 3 10 | 1,25,572 9 5 | 1,05,631 0 0 | 19,941 9 5 |
| Arcot, South .. .. .. | Do. | 16,913 4 5 | 1,57,484 13 1 | 1,74,398 1 6 | 1,55,125 0 0 | 19,273 1 6 |
| Salem, North .. .. | Do. | 26,712 4 8 | 1,57,072 15 3 | 1,83,785 3 11 | 1,26,499 0 0 | 57,286 3 11 |
| Do. South .. .. | Do. | 35,576 10 2 | 94,144 12 2 | 1,29,721 6 4 | 1,02,504 0 0 | 27,217 6 4 |
| Trichinopoly .. .. .. | Do. | 9,035 0 0 | 1,31,619 13 9 | 1,40,654 13 9 | 1,01,505 0 0 | 39,149 13 9 |
| Madura .. .. .. | Do. | 35,553 1 2 | 1,83,340 9 1 | 2,18,893 10 3 | 1,31,761 0 0 | 87,132 10 3 |
| Tinnevelly .. .. .. | Do. | 21,437 13 11 | 1,52,099 1 1 | 1,73,536 15 0 | 1,54,309 0 0 | 19,227 15 0 |
| Forest Engineer .. .. | Do. | .. | 989 0 0 | 989 0 0 | 989 0 0 | .. |
| | Total .. | 2,02,536 10 5 | 16,42,990 11 6 | 18,45,527 5 11 | 14,22,218 0 0 | 4,23,309 5 11 |
| *Western Circle.* | | | | | | |
| Direction .. .. .. | Timber and other forest produce. | .. | 228 0 0 | 228 0 0 | 228 0 0 | .. |
| Mangalore, North .. .. | Do. | 10,157 9 3 | 1,03,681 15 3 | 1,13,839 8 6 | 99,525 0 0 | 14,314 8 6 |
| Do. South .. .. | Do. | 6,801 5 8 | 1,14,282 3 9 | 1,21,083 9 5 | 1,11,423 0 0 | 9,660 9 5 |
| Malabar, North .. .. | Do. | 12,557 15 0 | 1,27,998 3 7 | 1,40,556 2 7 | 1,14,726 0 0 | 25,830 2 7 |
| Do. South .. .. | Do. | 4,023 14 4 | 5,31,497 1 8 | 5,35,521 0 0 | 3,92,014 0 0 | 1,43,507 0 0 |
| The Nilgiris .. .. .. | Do. | 9,192 10 3 | 1,49,101 7 9 | 1,58,294 2 0 | 1,34,647 0 0<br>* 47 12 7 | 23,599 5 5 |
| Kollegal .. .. .. | Do. | 1,000 0 0 | 1,36,222 10 0 | 1,37,222 10 0 | 1,21,168 0 0 | 16,054 10 0 |
| Coimbatore, North .. .. | Do. | 26,076 5 6 | 3,51,362 3 5 | 3,77,438 8 11 | 3,47,010 0 0 | 30,428 8 11 |
| Do. Central .. .. | Do. | 50,005 14 10 | 1,42,523 0 11 | 1,92,528 15 9 | 1,39,784 0 0 | 52,744 15 9 |
| Do. South .. .. | Do. | 14,409 8 3 | 2,61,411 11 3 | 2,75,821 3 6 | 2,56,217 0 0 | 19,604 3 6 |
| Working Plans office .. | Do. | .. | 9 0 0 | 9 0 0 | 9 0 0 | .. |
| Forest Engineer .. .. | Do. | .. | 516 0 0 | 516 0 0 | 516 0 0 | .. |
| | Total .. | 1,34,225 3 1 | 19,18,833 9 7 | 20,53,058 12 8 | 17,17,267 0 0<br>* 47 12 7 | 3,35,744 0 1 |
| Grand total, Presidency .. | | 9,12,142 12 11 | 56,10,680 4 5 | 65,22,723 1 4 | 49,22,351 11 0 | 15,00,371 6 4 |

Note for Northern Circle.
(a) Elimination on account of erroneous demand. (b) Written off the accounts.
(c) Out of the total outstandings of Rs. 1,18,243-8-7, the amount actually due on or before 30th June 1919 was Rs. 12,592-8-7.
(d) Excludes Rs. 31,116 belonging to Parlakimedi Maliahs. (e) Excludes Rs. 30,839 belong to Parlakimedi Maliahs.
(f) Do. 277 do

Note for Central Circle.
(a) Elimination due to panchayats having been cancelled. (b) Elimination Sandur leased forests having been handed back to State.
(c) Elimination being excess and wrong demand. (d) Wrong credit to other heads.
(e) Written off.

* Written off the accounts.

NOTE.—Out of the total outstandings of Rs. 3,35,744-0-1, the amount actually due on or before 30th June 1919 was Rs. 70,777.

## ANNUAL FORM No. 83.

*Forest Department, Madras Presidency.*

Financial results of the year 1918–19.

| District. | Timber and other produce removed from the forests by Government Agency. | | Other revenue. | | Formation, protection and improvement of forests. | Total. | |
|---|---|---|---|---|---|---|---|
| | Receipts. | Charges. | Receipts. | Charges. | Charges. | Receipts. | Charges. |
| ***Northern Circle.*** | RS. | RS. | RS. | RS. | RS. | RS. | RS. |
| Ganjam .. .. | 41,296 | 58,161 | 53,588 | 51,776 | 32,592 | 94,884 | 1,42,529 |
| Vizagapatam .. .. | 1,185 | 916 | 47,978 | 32,473 | 5,685 | 49,163 | 39,074 |
| Godavari, Upper .. | 26,259 | 9,626 | 25,356 | 32,629 | 28,199 | 51,615 | 70,454 |
| Do. Lower .. | 1,470 | 612 | 1,88,192 | 71,450 | 19,440 | 1,89,662 | 91,502 |
| Kistna .. .. .. | 244 | 89 | 60,538 | 29,344 | 13,614 | 60,782 | 43,047 |
| Kurnool, East .. | 11,811 | 8,647 | 44,855 | 36,960 | 35,927 | 56,666 | 81,534 |
| Do. South .. | 3,590 | 512 | 63,104 | 51,671 | 25,040 | 66,694 | 77,223 |
| Do. West .. | 52,095 | 31,678 | 73,594 | 69,252 | 22,648 | 1,25,689 | 1,23,578 |
| Golugonda and Hill Madgole Agency. | .. | .. | 3,249 | 5,150 | .. | 3,249 | 5,332 |
| Total .. | (a)1,37,950 | (b) 1,10,236 | (c) 5,57,205 | (d)3,75,555 | (e)1,83,145 | (f)6,95,155 | (g)6,68,936<br>(a) 7,707 |
| ***Central Circle.*** | | | | | | | |
| Bellary .. .. | 411 | 60 | 1,65,922 | 40,328 | 19,694 | 1,66,333 | 60,082 |
| Anantapur .. .. | 12,202 | 1,921 | 2,03,684 | 39,540 | 25,960 | 2,15,886 | 67,421 |
| Guntur .. .. | 1,217 | 157 | 1,71,312 | 39,520 | 23,459 | 1,72,529 | 63,136 |
| Nellore .. .. .. | 6,053 | 4,496 | 1,23,173 | 51,246 | 26,007 | 1,29,226 | 81,749 |
| Cuddapah, North .. | 4,889 | 629 | 49,756 | 35,876 | 20,897 | 54,645 | 57,402 |
| Do. South .. | 11,980 | — 4,456 | 48,184 | 49,233 | 26,409 | 60,164 | 71,186 |
| Do. West .. | 30,083 | 5,377 | 79,961 | 45,203 | 28,294 | 1,09,994 | 78,874 |
| Chingleput .. .. | 477 | 357 | 63,958 | 38,090 | 19,972 | 64,435 | 58,419 |
| Chittoor .. .. | 491 | 752 | 1,08,166 | 52,848 | 38,434 | 1,08,657 | 92,034 |
| Total .. | 67,753 | 9,293 | 10,14,116 | 3,91,884 | 2,29,126 | 10,81,869 | 6,30,303<br>(a) 9,246 |
| ***Southern Circle.*** | | | | | | | |
| Vellore, North .. | 14,734 | 15,254 | 1,02,333 | 32,880 | 24,761 | 1,17,067 | 72,895 |
| Do. South .. | 92,097 | 3,669 | 1,00,095 | 34,742 | 59,532 | 1,92,192 | 97,943 |
| Do. West .. | 1,14,090 | 13,113 | 54,684 | 22,998 | 52,746 | 1,68,774 | 88,857 |
| Arcot, South .. .. | 1,236 | 541 | 1,56,263 | 34,204 | 11,227 | 1,57,499 | 45,972 |
| Salem, North .. .. | 58,491 | 7,868 | 1,36,572 | 51,249 | 27,145 | 1,95,063 | 86,262 |
| Do. South .. .. | 37,081 | 7,163 | 1,05,516 | 45,429 | 32,212 | 1,42,597 | 84,804 |
| Trichinopoly .. .. | 37,647 | 4,329 | 1,04,864 | 33,538 | 11,002 | 1,42,511 | 48,869 |
| Madura .. .. | 337 | 1,186 | 1,51,429 | 51,273 | 70,294 | 1,51,766 | 1,22,753 |
| Tinnevelly | 1,403 | 1,188 | 1,53,346 | 54,988 | 26,283 | 1,54,749 | 82,459 |
| Total .. | 3,57,116 | 54,311 | 10,65,102 | 3,61,301 | 3,15,202 | 14,22,218 | 7,30,814<br>(a) + 15,299 |
| ***Western Circle.*** | | | | | | | |
| Mangalore, North .. | | | | | | | |
| Do. South .. | 34,247 | 51,852 | 65,303 | 25,196 | 10,736 | 99,550 | 87,784 |
| Malabar, North .. | 54,632 | 66,567 | 56,817 | 23,991 | 15,592 | 1,11,449 | 1,06,150 |
| Do. South .. | 90,635 | 45,605 | 24,126 | 18,685 | 29,713 | 1,14,761 | 94,003 |
| The Nilgiris .. .. | 3,74,618 | 1,53,230 | 17,422 | 9,129 | 41,781 | 3,92,040 | 2,04,090 |
| Kollegal .. .. | 1,00,276 | 1,10,228 | 34,396 | 16,345 | 38,436 | 1,34,672 | 1,65,009 |
| Coimbatore, North .. | 70,200 | 2,697 | 50,993 | 24,265 | 19,022 | 1,21,193 | 45,984 |
| Do. Central .. | 2,05,918 | 7,160 | 1,41,117 | 49,606 | 37,282 | 3,47,035 | 94,048 |
| Do. South .. | 4,901 | 9,151 | 1,34,908 | 37,144 | 51,605 | 1,39,809 | 97,900 |
| Total .. | 80,838 | 97,210 | 1,75,920 | 48,979 | 28,483 | 2,56,758 | 1,74,622 |
| | 10,16,265 | 5,48,700 | 7,01,002 | 2,53,340 | 2,72,550 | 17,17,267 | (i) 10,69,590 |
| Grand total, Presidency. | 15,79,084 | 7,17,540 | 33,37,425 | 13,82,080 | 10,00,023 | 49,16,509 | 31,31 895 |

(a) Refunds and drawbacks.
(b) Excludes Rs. 6,787, belonging to Parlakimedi Maliahs.
(c) Do. 504 do. do.
(d) Do. 24,053 do. do.
(e) Do. 3,258 do. do.
(f) Do. 25 052 do. do.
(g) Do. 30,840 do. do.
(h) Do. 28,814 do. do.
(i) Includes refunds and drawbacks.

## Annual Form No. 84.

## Part I.

*Forest Department, Madras Presidency.*

Statement of elephants and other live-stock during 1918–19.

| District. | On hand at the commencement of the year. | | Number received during the year. | Number disposed of during the year. | On hand at the end of the year. | | Total expenditure on maintenance during the year. |
|---|---|---|---|---|---|---|---|
| | Number. | Value. | | | Number. | Value. | |
| **(1) Elephants.** | | | | | | | |
| *Northern Circle.* | | Rs. | | | | Rs. | Rs. A. P. |
| Ganjam .. .. | 2 | 2,700 | .. | .. | 2 | 2,700 | 2,067 0 0 |
| Vizagapatam .. .. | 1 | 3,000 | .. | 1 | .. | .. | 245 0 0 |
| Godavari, Upper .. .. | 2 | 3,700 | .. | . | 2 | 3,700 | 1,940 0 0 |
| Kurnool, West .. .. | 2 | 5,500 | .. | .. | 2 | 5,500 | 2,088 0 0 |
| Total .. | 7 | 14,900 | .. | 1 | 6 | 11,900 | 6,340 0 0 |
| *Central Circle*—Nil. | | | | | | | |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Mangalore, South .. .. | 4 | * 15,800 | 5 | 3 | 6 | 20,000 | 7,131 3 5 |
| Malabar, North .. .. | 14 | 48,750 | 24 | 9 | 29 | 61,600 | 11,924 13 7 |
| Do. South .. .. | 39 | 1,29,050 | 22 | 23 | 38 | 1,32,700 | 28,198 10 9 |
| The Nilgiris .. .. | 24 | 64,800 | 25 | 22 | 27 | 71,700 | † 23,268 12 7 |
| Coimbatore, Central .. | 4 | 11,500 | .. | 4 | .. | .. | 2,345 4 8 |
| Do. South .. | 21 | 52,400 | 21 | 18 | 24 | 77,300 | 18,188 4 4 |
| Total .. | 106 | 3,22,300 | 97 | 79 | 124 | 3,63,300 | 91,057 1 4 |
| Grand total (Elephants), Presidency. | 113 | 3,37,200 | 97 | 80 | 130 | 3,75,200 | 97,397 1 4 |
| **(2) Other live-stock.** | | | | | | | |
| *Northern Circle.* | | | | | | | |
| Ganjam .. .. .. | 6 | 208 | 12 | 12 | 6 | 230 | ‡ 426 0 0 |
| Kurnool, East .. .. | 5 | 74 | .. | (*a*) 3 | 2 | 24 | .. |
| Do. West .. .. | 17 | 850 | .. | (*b*) 1 | 16 | 800 | 1,812 0 0 |
| Total .. | 28 | 1,132 | 12 | 16 | 24 | 1,054 | 2,238 0 0 |
| *Central Circle.* | | | | | | | |
| Chittoor .. .. .. | 3 | § 87 | .. | 1 | 2 | 77 | .. |
| *Southern Circle*—Nil. | | | | | | | |
| *Western Circle.* | | | | | | | |
| Malabar, South .. .. | 25 | 1,233 | 24 | 3 | 46 | 2,129 | 5,331 10 10 |
| The Nilgiris .. .. | 6 | 462 | .. | 1 | 5 | 372 | .. |
| Coimbatore, South .. .. | 73 | 5,202 | 58 | 27 | 104 | 7,061 | 13,491 9 7 |
| Total .. | 104 | 6,897 | 82 | 31 | 155 | 9,562 | 18,823 4 5 |
| Grand total (Other Live-stock), Presidency. | 135 | 8,116 | 94 | 48 | 181 | 10,693 | 20,635 4 5 |

* Revised figure reported by the District Forest Officers.
† Includes the value of 5 bullocks.
‡ Debited to A-I (*a*).
§ Revised figure.
(*a*) Two asses were written off and one was sold.
(*b*) Died.

## PART II.

### Statement of elephants gone off the list during the year 1918–19.

| District. | Names. | When purchased or otherwise obtained by Government. | Age. | How disposed of. |
|---|---|---|---|---|
| | | *Northern Circle.* | YRS. | |
| Visagapatam. | Ethel .. .. | Captured on 18th April 1895 in North Malabar and transferred from the Western Circle on 3rd December 1897. | 54 | Transferred to the Agency Department, G.O. No. 1660, Home (Judicial), dated 17th July 1918. |
| | | *Central Circle*—Nil. | | |
| | | *Southern Circle*—Nil. | | |
| | | *Western Circle.* | | |
| Mangalore, South. | 1. Halima .. | Captured on 3rd July 1918 .. .. .. | 51 | Sold. |
| | 2. Arabi .. .. | Do. 30th July 1918 .. .. .. | 3 | |
| | 3. Gowri .. .. | Born on 12th September 1916 .. .. | 2½ | |
| Malabar, North. | 1. Nethravathi .. | Captured on 21st February 1905 .. .. | 21 | Temporarily transferred to Malabar, South. |
| | 2. Ranger .. | Do. 17th March 1906 .. .. | 24 | |
| | 3. Dostejehan .. | Born on 3rd February 1902 .. .. .. | 17 | |
| | 4. Countess .. | Captured on 5th June 1910 .. .. .. | 26 | |
| | 5. Parvathi .. | Born on 2nd November 1916 .. .. | 2 | Transferred to The Nilgiris in September 1918. |
| | 6. Desaraj .. | Do. 8th May 1917 .. .. .. | 2 | |
| | 7. Savithri .. | Captured on 3rd April 1918 .. .. .. | 5 | |
| | 8 Champagam .. | Do. 9th April 1918 .. .. | 14 | |
| | 9. Kabini .. | Do. 10th January 1919 .. .. | 30 | Shot having broken her thigh bone. |
| Malabar, South. | 1. Ranger .. | Captured on 17th March 1906 .. .. | 24 | Retransferred to Malabar, North, in August 1918. |
| | 2. Dostejehan .. | Born on 3rd February 1902 .. .. .. | 17 | |
| | 3. Bessie .. .. | Do. 3rd July 1899 .. .. .. | 20 | |
| | 4. Desaraj .. | Do. 8th May 1917 .. .. .. | 2 | |
| | 5. Padmini .. | Captured on 10th February 1896 .. .. | 49 | Retransferred to The Nilgiris in January 1919. |
| | 6. Cæsar .. .. | Do. 12th February 1910 .. .. | 15 | |
| | 7. Valmiki .. | Do. 12th May 1914 .. .. .. | 12 | |
| | 8. Drona .. .. | Do 2nd „ „ .. .. .. | 12 | |
| | 9. Kamala .. | Do. 3rd February 1912 .. .. | 26 | |
| | 10. Kamakshi .. | Do. 11th April 1914 .. .. | 22 | |
| | 11. Norah .. .. | Do. 12th March 1906 .. .. | 21 | |
| | 12. Hector .. | Do. 13th April 1906 .. .. | 19 | |
| | 13. Baker Ali .. | Do. 10th May 1911 .. .. | 18 | |
| | 14. Mari .. .. | Do. 20th March 1906 .. .. | 22 | |
| | 15. Togo .. .. | Do. 19th June 1905 .. .. | 16 | |
| | 16. Shanker .. | Do. 21st May 1907 .. .. | 16 | |
| | 17. Persaeus .. | Do. 18th December 1917 .. .. | 7 | Transferred to The Nilgiris in August 1918. |
| | 18. Cambrai .. | Do. 7th April 1918 .. .. | 7 | |
| | 19. Satyabhama .. | Do. 13th May 1914 .. .. | 34 | Sold. |
| | 20. Pankajam .. | Do. 18th September 1918 .. .. | 6 | Died. |
| | 21. Nurmahal II .. | Do. 28th September 1917 .. .. | 28 | |
| | 22. Port Arthur .. | Do. 30th January 1905 .. .. | 17 | |
| | 23. Gordon .. | Captured in February 1889 .. .. .. | 39 | |
| The Nilgiris. | 1. Padmini .. | Captured on 10th February 1896 .. .. | 49 | Temporarily transferred to Malabar, South. |
| | 2. Krishna .. | Do. 30th March 1916 .. .. | 18 | |
| | 3. Rolly .. .. | Do. 17th April 1916 .. .. | 17 | |
| | 4. Mathava .. | Do. 12th March 1906 .. .. | 16 | |
| | 5. Hector .. .. | Do. 13th April 1906 .. . | 19 | |
| | 6. Shanker .. | Do. 21st May 1907 .. .. | 16 | |
| | 7. Caesar .. .. | Do. 12th February 1910 .. .. | 15 | |
| | 8. Kamakshi .. | Do. 11th April 1914 .. .. | 22 | |
| | 9. Jhelum .. | Do. 27th June 1902 .. .. | 29 | Permanently transferred to Malabar, South. |
| | 10. Droupadi .. | Do. 11th April 1914 .. .. | 37 | |
| | 11. Godavari .. | Do. 12th March 1905 .. .. | 33 | |
| | 12. Baghirathi .. | Born on 24th December 1916 .. .. | 2 | Sold. |
| | 13. Nawab .. .. | Do. 22nd November 1916 .. .. | 2 | |
| | 14. Savitri .. .. | Captured on 3rd April 1918 .. .. | 5 | |
| | 15. Parvathi .. | Born on 2nd November 1916 .. .. | 2 | |
| | 16. Desaraj .. | Do. 8th May 1917 .. .. .. | 2 | |
| | 17. Lassie .. | Captured on 18th April 1907 .. .. | 18 | Died. |
| | 18. Indravathi .. | Do. 31st July 1917 .. .. .. | 13 | |
| | 19. Cambrai .. | Do. 7th April 1918 .. .. .. | 7 | |
| | 20. Devaki .. | Do. 20th August 1918 .. .. | 33 | |
| | 21. Gowri .. | Do. 23rd December 1919 .. .. | ¼ | |
| | 22. Fakir .. | Do. 22nd May 1917 .. .. .. | 14 | Shot dead. |

Statement of elephants gone off the list during the year 1918-19—*cont.*

| District. | Names. | When purchased or otherwise obtained by Government. | Age. | How disposed of. |
|---|---|---|---|---|
| | | *Western Circle*—cont. | | |
| | | | YRS. | |
| Coimbatore, Central. | 1. Srinivasan .. | Captured on 4th February 1918 .. .. | 9 | Transferred to Coimbatore, South. |
| | 2. Kalyani .. | Do. 26th February 1918 .. .. | 7 | |
| | 3. Abdul Rahiman. | Do. 7th April 1900 .. .. .. | 38 | |
| | 4. Kunju .. | Do. 16th March 1897 .. .. | 27 | |
| Coimbatore, South. | 1. Nurjehan .. | Captured on 22nd November 1917 .. .. | 21 | Sold. |
| | 2. Rani .. .. | Do. 19th January 1918 .. .. | 36 | |
| | 3. Sarada .. .. | Do. 12th ,, 1918 .. .. | 4 | |
| | 4. Janaki .. | Do. 20th August 1918 .. .. | 1 | |
| | 5. Menaka .. | Do. 18th September 1918 .. | 2 | |
| | 6. Gopalan .. | Do. 18th ,, ,, .. .. | 2 | |
| | 7. Leela .. .. | Do. 18th ,, ,, .. .. | 1 | |
| | 8. Amir .. .. | Do. 24th October 1918 .. .. | 2 | |
| | 9. Ramachandran. | Do. 14th November 1918 .. .. | 1 | |
| | 10. Devaki .. | Do. 20th August 1918 .. .. | 33 | Transferred to The Nilgiris. |
| | 11. Poonachi .. | Do. 8th April 1918 .. .. | 31 | |
| | 12. Srinivasan .. | Do. 4th February 1918 .. .. | 9 | |
| | 13. Kalyani .. | Do. 26th ,, ,, .. .. | 7 | |
| | 14. Nurmahal II .. | Do. 28th September 1917 .. .. | 28 | Transferred to Malabar, South. |
| | 15. Pankajam .. | Do. 18th September 1918 .. .. | 6 | |
| | 16. Lakshimi .. | Do. 6th April 1918 .. .. | 26 | Died. |
| | 17. Tusker (unnamed). | Do. 3rd April 1919 .. .. | 5 | |
| | 18. Sekaran .. | Born on 18th August 1918 .. .. | ¾ | Killed by a tiger. |

ANNUAL FORM No. 85.

*Forest Department, Madras Presidency.*

Abstract showing the value of stores, tools and plant for 1918-19.

| District. | Buildings. | | | | Stores. | | | | Totals. | | | | Difference in value | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | On hand at the commencement of the year. | | On hand at the end of the year. | | | |
| | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | Number. | Value. | In favour of the year. | Against the year. |
| *Northern Circle.* | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | | Rs. | Rs. | Rs. |
| Direction .. | 1 | 1,590 | 1 | 1,430 | 414 | 2,196 | 386 | 2,303 | 415 | 3,785 | 387 | 3,733 | .. | 52 |
| Ganjam .. | 118 | 50,399 | 108 | 47,650 | 3,754 | 8,092 | 3,833 | 7,572 | 3,872 | 58,491 | 3,941 | 55,222 | .. | 3,269 |
| Vizagapatam .. | 89 | 7,816 | 73 | 9,647 | 1,538 | 4,144 | 1,529 | 4,347 | 1,627 | 11,960 | 1,602 | 13,994 | 2,034 | .. |
| Godâvari, Upper. | 125 | 27,765 | 126 | 26,709 | 3,201 | 16,873 | 3,558 | 15,471 | 3,326 | 44,638 | 3,684 | 42,180 | .. | 2,458 |
| Godâvari, Lower. | 156 | 41,264 | 154 | 43,184 | 2,244 | 4,098 | 2,275 | 4,779 | 2,400 | 45,302 | 2,429 | 47,963 | 2,661 | .. |
| Kistna .. | 38 | 5,313 | 36 | 4,767 | 1,358 | 10,112 | 1,483 | 10,201 | 1,396 | 15,425 | 1,519 | 14,968 | .. | 457 |
| Kurnool, East. | 54 | 45,798 | 60 | 46,620 | 2,909 | 6,039 | 2,935 | 6,541 | 2,963 | 51,837 | 2,995 | 53,161 | 1,324 | .. |
| Do. South. | 63 | 45,668 | 67 | 47,762 | 2,761 | 6,235 | 2,937 | 6,718 | 2,824 | 51,903 | 3,004 | 54,480 | 2,577 | .. |
| Do. West. | 113 | 84,423 | 113 | 84,743 | 8,504 | 11,298 | 8,439 | 11,155 | 8,617 | 95,721 | 8,551 | 95,898 | 177 | .. |
| Total .. | 757 | 3,09,976 | 738 | 3,12,512 | 26,683 | 69,086 | 27,374 | 69,087 | 27,440 | 3,79,062 | 28,112 | 3,81,599 | 2,537 | .. |
| *Central Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 370 | 2,871 | 345 | 2,256 | 370 | 2,871 | 345 | 2,256 | .. | 615 |
| Bellary .. | 51 | 61,758 | 48 | 51,219 | 3,047 | 12,284 | 2,994 | 12,866 | 3,098 | 74,042 | 3,042 | 64,085 | .. | 9,957 |
| Anantapur .. | 35 | 51,953 | 34 | 51,953 | 2,784 | 17,600 | 2,962 | 5,476 | 2,819 | 69,553 | 2,996 | 57,429 | .. | 12,124 |
| Guntûr .. | 26 | 10,116 | 28 | 11,247 | 2,652 | 5,728 | 2,900 | 5,713 | 2,678 | 15,844 | 2,928 | 16,960 | 1,116 | .. |
| Cuddapah, North. | 55 | * 26,264 | † 49 | 21,255 | * 1,419 | * 3,677 | 1,624 | 3,972 | * 1,547 | * 30,792 | 1,673 | 25,227 | .. | 5,565 |
| Cuddapah, South. | 48 | 16,706 | 48 | 22,380 | 865 | 4,451 | 872 | 5,722 | 911 | 21,157 | 920 | 28,102 | 6,945 | . |
| Cuddapah, West. | 24 | 5,546 | 36 | 5,670 | 1,729 | 5,067 | 2,018 | 6,895 | 1,753 | 10,613 | 2,054 | 12,565 | 1,952 | .. |
| Nellore .. | 53 | 33,168 | 57 | 34,448 | 45,919 | 31,861 | 56,326 | 35,345 | 45,972 | 65,029 | 56,383 | 69,793 | 4,764 | .. |
| Chingleput .. | 23 | 9,077 | 24 | 9,526 | 1,616 | 2,960 | 2,760 | 3,463 | 1,638 | 12,037 | 2,784 | 12,989 | 952 | .. |
| Chittoor .. | 44 | 22,472 | 43 | 23,084 | 2,708 | 5,204 | 3,491 | 8,658 | 2,752 | 27,676 | 3,534 | 31,742 | 4,066 | .. |
| Vernacular Training School. | .. | .. | .. | .. | 634 | 933 | 695 | 1,253 | 634 | 933 | 695 | 1,253 | 320 | .. |
| Total .. | 357 | *2,37,060 | 367 | 2,30,782 | *63,743 | *92,636 | 76,987 | 91,619 | * 64,173 | *3,30,547 | 77,354 | 3,22,401 | .. | 8,146 |
| *Southern Circle.* | | | | | | | | | | | | | | |
| Direction .. | .. | .. | .. | .. | 188 | 2,269 | 205 | 1,639 | 188 | 2,269 | 205 | 1,639 | .. | 630 |
| Vellore, North. | 42 | 22,482 | 37 | 21,833 | 1,660 | 4,490 | 1,472 | 4,330 | 1,702 | 26,972 | 1,509 | 26,163 | .. | 809 |
| Do. South. | 36 | 26,397 | 41 | 32,352 | 2,077 | 5,865 | 2,046 | 5,206 | 2,113 | 31,262 | 2,087 | 37,558 | 6,296 | .. |
| Do. West. | 19 | 16,627 | 19 | 15,752 | 1,170 | 6,420 | 2,283 | 6,448 | 1,189 | 23,047 | 2,302 | 22,200 | .. | 847 |
| South Arcot .. | 32 | 19,513 | 31 | 22,446 | 1,634 | 3,287 | 1,633 | 3,283 | 1,666 | 22,800 | 1,664 | 25,729 | 2,929 | .. |
| Salem, North .. | 130 | 99,583 | 116 | 61,094 | 2,911 | 8,834 | 3,022 | 9,746 | 3,041 | 1,08,422 | 3,138 | 70,840 | .. | 37,582 |
| Do. South .. | 57 | 38,032 | 56 | 34,162 | 3,019 | 6,945 | 3,038 | 7,221 | 3,076 | 44,977 | 3,094 | 41,383 | .. | 3,594 |
| Trichinopoly .. | 36 | 18,837 | 39 | 22,466 | 2,966 | 9,370 | 3,167 | 8,850 | 3,002 | 28,207 | 3,206 | 31,316 | 3,109 | .. |
| Madura .. | 109 | 82,979 | 113 | 95,517 | 3,219 | 5,134 | 3,225 | 6,217 | 3,328 | 88,113 | 3,338 | 1,01,734 | 13,621 | .. |
| Tinnevelly .. | 109 | ‡ 53,507 | 110 | 52,726 | ‡ 1,851 | 4,009 | 1,787 | 3,728 | 1,960 | ‡ 57,516 | 1,897 | 56,454 | .. | 1,062 |
| Working Plans. | .. | .. | .. | .. | 260 | 1,733 | 257 | 1,593 | 260 | 1,733 | 257 | 1,593 | .. | 140 |
| Vernacular Training School. | .. | .. | .. | .. | 827 | 2,314 | 907 | 2,146 | 827 | 2,314 | 907 | 2,146 | .. | 168 |
| Total .. | 570 | 3,76,962 | 562 | 3,58,348 | 21,782 | 60,670 | 23,042 | 60,407 | 22,352 | 4,37,632 | 23,604 | 4,18,755 | .. | 18,877 |
| *Western Circle.* | | | | | | | | | | | | | | |
| Direction .. | 1 | 63 | 1 | 60 | 386 | 4,767 | 401 | 4,701 | 387 | 4,830 | 402 | 4,761 | .. | 69 |
| Mangalore, North. | § 41 | § 24,583 | 42 | 25,930 | 926 | § 4,204 | 944 | 4,249 | 967 | 28,787 | 986 | 30,179 | 1,392 | .. |
| Do. South. | 26 | 14,433 | 26 | 14,433 | 1,182 | 4,282 | 1,171 | 3,957 | 1,208 | 18,715 | 1,197 | 18,390 | .. | 325 |
| Malabar, North | 80 | 47,731 | 83 | 47,987 | 3,005 | 4,733 | 2,935 | 4,457 | 3,085 | 52,464 | 3,018 | 52,444 | .. | 20 |
| Do. South. | 56 | 42,289 | 55 | 40,397 | 1,685 | 5,556 | 1,803 | 6,090 | 1,741 | 47,845 | 1,858 | 46,487 | .. | 1,358 |
| The Nilgiris .. | 72 | 47,796 | 73 | 42,658 | 2,378 | 11,449 | 2,300 | 10,457 | 2,450 | 59,244 | 2,373 | 53,115 | .. | 6,130 |
| Kollegal .. | 33 | § 17,907 | 33 | 16,130 | ‖ 21,136 | § 6,177 | 21,175 | 5,679 | ¶ 21,169 | 24,084 | 21,208 | 21,709 | .. | 2,375 |
| Coimbatore, North. | 76 | 62,099 | 75 | 88,129 | 3,043 | 10,683 | 3,186 | 9,563 | 3,119 | 72,782 | 3,261 | 97,692 | 24,910 | .. |
| Do. Central | 56 | 19,903 | 68 | 23,457 | 1,795 | 6,977 | 1,702 | 7,477 | 1,851 | 26,880 | 1,770 | 30,934 | 4,054 | .. |
| Do. South. | 71 | 41,293 | 72 | 40,467 | 6,006 | 8,674 | 24,119 | 21,064 | 6,077 | 49,967 | 24,191 | 61,531 | 11,564 | .. |
| Veterinary Training School. | .. | .. | .. | .. | 387 | 1,865 | 459 | 2,124 | 387 | 1,865 | 459 | 2,124 | 259 | .. |
| Working Plans Office. | .. | .. | .. | .. | 90 | 1,158 | 79 | 1,461 | 90 | 1,158 | 79 | 1,461 | 303 | .. |
| Forest Engineer. | .. | .. | .. | .. | 415 | (a) | 436 | (a | 415 | (a | 436 | (a) | .. | .. |
| Total .. | 512 | 3,18,097 | 523 | 3,39,648 | 42,434 | 70,525 | 60,710 | 81,179 | 42,946 | 3,88,622 | 61,233 | 4,20,827 | 32,205 | .. |
| Grand total, Presidency. | 2196 | 12,42,095 | 2195 | 12,41,290 | 159,642 | 292,917 | 188,113 | 302,292 | 156,911 | 15,35,863 | 190,308 | 15,43,582 | 7,719 | |

* Difference between the closing balance of 1917-18 and the present opening balance is due to the adoption of correct figures furnished by the District Forest officer.

† Decrease due to transfer of certain buildings to West Cuddapah in 1917-18 which were not deducted previously.

‡ Revised figures furnished by the District Forest Officer. The stores relating to Forest Engineer are not included in this Circle return as the same are shown in the Western Circle return.

§ Revised figures furnished by District Forest Officers.

¶ Last years figures was a mistake.

‖ Includes 19,200 bricks.

(a) Value is not given.

# Government of Madras

REVENUE (SPECIAL) DEPARTMENT.

## G.O. No. 2293, 11th December 1919

### Forest Administration Report

Reviewing the — for the year 1918-19 and for the quinquennium ending with that year.

READ—the following paper :—

*Letter*—from the Hon'ble Mr. S. Cox, Chief Conservator of Forests.
*To*—the Secretary to Government, Revenue (Special) Department.
*Dated*—Madras, the 17th November 1919.
*No.*—52 Forests.

I have the honour to submit the progress report of forest administration of the Madras Presidency for the year ending 30th June 1919. A summary of the progress made in forest administration in the Presidency during the quinquennium ending with the year 1918–19 is appended.

2. *Alteration in area.*—Some 7 square miles mostly in *Nellore*, *Trichinopoly*, *North Malabar*, *South Malabar* and *South Coimbatore* were constituted reserved forests during the year, and in pursuance of the policy recommended by the Forest Committee of abandoning small and isolated reserves, about 91 square miles were disafforested in *Kurnool*, *South Arcot*, *Chittoor* and other districts. There was a decrease of 39 square miles due to the adoption of Survey of India figures in *Trichinopoly* division and of about 2 square miles by rectification of boundaries in several isolated forest areas. A net result of these changes was a decrease of 125 square miles in the total area of reserved forests, which stood at 18,712 square miles at the close of the year.

Certain forest lands in *Guntūr* and *Anantapur* suitable for colonization were disafforested and assigned for Indian soldiers who had distinguished themselves in the war.

The area of reserved lands rose from 668 to 682 square miles. About 83 square miles chiefly in the Agency tracts of *Gōdāvari* and in *Nellore* were notified under section 4 of the Forest Act. Over 7 square miles were notified under section 16 and nearly 62 square miles of Sandur leased forests in *Bellary* were handed over to the Darbar during the year.

3. *Forest Settlement.*—As in the previous year, Forest settlement work was carried out by Revenue Divisional officers. Out of a total area of 496 square miles which awaited settlement at the close of the year, the Northern Circle alone accounts for an area of 418 square miles consisting of three large blocks in the two *Gōdāvari* divisions. The final notification in respect of Peddamedisileru block (96·48 square miles), one of the two blocks which were expected to be ready for publication during 1918–19, was received after the close of the year, and submitted to Government for approval. The question of further forest reservation and the general management of the forests in the Rampa Agency of the *Gōdāvari* district was under the consideration of Government during the year; and steps are being taken to reserve some of the still valuable unreserved sal areas in *Ganjām*. A special Deputy Collector has been appointed for six months for the reservation of about 30 square miles of unreserved forests in the Attur taluk of the *North Salem* division; and about 24 square miles of unreserved forests are awaiting settlement in *South Salem* division.

4. *Demarcation.*—About 118 miles of forest boundaries were newly demarcated during the year chiefly in the divisions of *Kurnool East*, *Bellary*, *Salem North* and

*Madura*, against 60 miles in the previous year. Four hundred and eighty-six miles remained to be demarcated at the close of the year principally in the districts of *Trichinopoly*, *South Mangalore*, *Kollegal* and *North Coimbatore*. The length of old boundaries repaired during the year was 17,368 against 17,996 miles in the previous year. The revision of boundary between the *Nilgiri* and *Coimbatore* districts, referred to in the last year's report, was completed and the draft notification describing the boundary was received from the Collector of *the Nilgiris*. The work of verifying and demarcating forest boundaries in *the Nilgiris*, postponed by Government in their Order Mis. No. 2491, Revenue, dated 2nd July 1918, was resumed during the year.

5. *Survey.*—The Survey of India continued its operations on a small scale in the *Nellore* division and about 12 square miles were surveyed on the two-inches to a mile scale.

6. *Working-plan.*—Working-plans covering an area of 191 square miles were sanctioned during the year, against 273 square miles in the previous year. The total area under working-plan sanctioned by the Board of Revenue up to the end of the year under report is reported to be 8,312 square miles. Revised working-plans covering an area of 1,718 square miles were under preparation by District Forest Officers. There are still over 6,000 square miles of forests for which no working-plans have been prepared and an almost equal area of forests for which existing working-plans are out of date, defective or merely provisional. No real progress in the preparation of scientific working-plans is possible at present for want of experienced officers; but whenever officers are available for the purpose, some progress in revising existing plans is being made. For instance, Mr. Minchin has been engaged since 1916 in preparing a new working-plan for the Gumsur forests; Mr Wood submitted during the year under report, a revised working-plan for the Mount Stuart forests; and Mr. Bourne completed the field work of his revised working-plan for the Nilambur Teak Plantations which will be submitted as soon as the Forest Map Officer at Dehra Dun can undertake the preparation of the working-plan maps. Apart from these important plans a certain amount of revision of temporary working plans has been carried out by the Divisional Forest Officers.

7. *Communications and buildings.*—The present system of carrying out road and building works under a five-years' scheme was abandoned as unworkable. The outlay on roads and bridges decreased from Rs. 1·55 lakhs to 1.47 lakhs while that on buildings rose from Rs. 1·16 lakhs to Rs. 1·34 lakhs, but all expenditure was kept as in the previous year within the lowest limits. A road from the plains to the Komattiyeri on the Javadi Plateau (the Gillman road) constructed at a cost of Rs. 1,20,300, was opened during the year, and on the same hills some progress was made on the construction of the Amerdi-Nadanur Ghaut road at a cost of Rs. 17,323. Plans and estimates for the Tekkadi scheme tramway to open up the Mount Stuart forests were submitted to Government for sanction but were returned for revision. Revised plans and estimates amounting to over Rs. 10 lakhs have since been received from the Forest Engineer and are now under scrutiny. The financial aspects are so doubtful that there is some probability of the scheme in its present form being abandoned.

8. The outturn of work by the present bullock-power tramway in the Tekkadi forests was 8,941 ton miles against 9,584 ton miles in the previous year. The working resulted in a loss of Rs. 8,306 against a profit of Rs. 6, 234 in the previous year; but, as the Conservator, Western Circle, states in his report, the figures mean little or nothing in the absence of a capital account, for no business firm would charge against annual current working expenses the cost of building a bridge or the purchase of plant.

9. *Miscellaneous works.*—The expenditure under this head increased from Rs. 8,514 to Rs. 10,466. The chief works consisted as usual in the construction and repair of tanks and wells. On the Javadis well-boring operations were carried out at five places and a protected draw well at Muthanur on the Yelagiris was under construction.

10. *Forest offences.*—The following table shows the forest offences of all kinds reported during the year. It will be seen that the total of new cases is 931 less

than in the preceding year and 2,528 less than the average of the three preceding years :—

| — | Injury to forests by fire. | | Unauthorized felling. | | Unauthorized grazing. | | Other offences. | | Total. | | Average of the three years ending 1917-18. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | 1917-18. | 1918-19. | |
| Cases taken to court .. | 44 | 37 | 4,565 | 4,666 | 1,631 | 2,010 | 306 | 375 | 6,546 | 7,088 | 6,760 |
| Cases compounded .. | 69 | 68 | 12,775 | 11,776 | 4,898 | 5,081 | 839 | 800 | 18,581 | 17,725 | 19,761 |
| Cases undetected .. | 1,474 | 924 | 408 | 328 | 60 | 78 | 22 | 17 | 1,964 | 1,347 | 2,167 |
| Total .. | 1,587 | 1,029 | 17,748 | 16,770 | 6,589 | 7,169 | 1,167 | 1,192 | 27,091 | 26,160 | 28,688 |

A large variety of reasons is given by local officers to account for increases and decreases, such as disafforestation, introduction of panchayat management of village forests, favourable season, unfavourable season, improved work of subordinate staffs, etc. The reason quoted in support of increase of offences in one division is sometime quoted as a reason for decrease in another ; and on the whole there is no evidence why a general decrease has occurred in the Presidency figures as a whole. A probable cause, not however, mentioned in any of the reports, is the fact that, as years go by, the villagers become used to forest restrictions and are less inclined to kick against the pricks.

11. Unauthorized felling as usual forms the largest head of forest crime in all the circles, Southern Circle contributing 41 per cent of the total. Grazing cases increased in all the circles and notably in the Central Circle, which contributed 50 per cent of the total number of offences under this head. They were most numerous in the districts of *Guntūr*, *Nellore* and *Chittoor*.

12. The percentage of cases taken to court, compounded and undetected were 27·10, 67·75 and 5·15, respectively, against 24·16, 68·59 and 7·25 respectively in the previous year. The total number of cases disposed of by Magistrates slightly rose from 6,671 to 6,867. Of these 6,352 or nearly 92·50 per cent ended in conviction against 91·66 per cent in the previous year. The fact that conviction in all but a small number of cases was obtained is satisfactory. The punishments awarded by Magistrates were generally adequate in all divisions except *Gōdāvari Upper*, *Kurnool West*, *West Vellore*, *Salem*, *West Cuddapah*, *Mangalore North* and the *Nilgiris*.

13. The total number of cases compounded was 14,541 and the compensation fees realized amounted to Rs. 1,56,694 against Rs. 1,72,932 in the previous year. The average compensation fee per case was Rs. 10–12–5 against Rs. 10–0–9 in the previous year.

14. The rules sanctioned by Government in G.Os. No. 1990, Revenue, dated 13th June 1910 and No. 3958, Revenue, dated 14th December 1910, for the guidance of Forest Officers in compounding offences are reported to have been generally observed.

15. Rewards amounting to Rs. 592 were granted to informers and subordinates against Rs. 1,122 granted in the previous year. The Nilgiri Game Association paid Rs. 88–4–0 to subordinates for detecting cases of poaching.

16. *Fire protection.*—The system of fire protection continued to be the same as in previous years. The total area over which special protection was attempted was 7,207 square miles against 7,142 square miles in the previous year. Five hundred and thirty-two square miles of the area so protected is reported to have been burnt, the percentage of failure falling from 9·7 to 7·4 per cent. The figures are however of little value owing to the difficulty of estimating the area burnt in such districts as *Kurnool* or *Upper Gōdāvari*. Instances of deliberate incendiarism occurred in the districts of *Kurnool*, *Bellary*, *North Cuddapah* and *Tinnevelly*. In some cases reserves were closed to grazing as a punishment for fires while in others, grazing fees were enhanced or the privileges of free removal of grass withdrawn. The whole question

of fire protection is complicated and difficult and the department has yet to find suitable measures by which the reasonable requirements of the graziers and of the jungle tribes can be met without permanent and progressive injury to the forests. Early burning of grass under departmental control appears, in some cases, a possible remedy but to be effective it involves very careful supervision and a considerable expenditure. The co-operation in fire protection of the hill tribes, wherever they are amenable to influence, continues to be a satisfactory feature of the administration, especially in *Ganjām*, *Vizagapatam* and on the Javadi hills. On the other hand, the Chenchus in *Kurnool* are responsible for burning immense areas of forest, and fire protection in the *Upper Gōdāvari* division was very unsuccessful. In addition to the specially protected areas, ordinary protection is reported to have been extended to 8,787 square miles of forest, all of which except about 200 square miles were successfully protected. As remarked by the Board of Revenue last year, the reliability of such figures is open to great doubt.

17. *Grazing.*—Of the total area of forests in the Presidency, about one-fourth was closed to grazing either wholly or for portions of the year. To the open area of nearly 14,000 square miles of forest, permits were issued for the grazing of 2,117,523 animals. The revenue derived amounted to Rs. 8·24 lakhs. The above figures suggest an average incidence of 4¼ acres of grazing to each animal, in itself a very small allowance under Indian conditions; but owing to the fact that the open areas contain large tracts of forests to which cattle are not driven or driven only in small numbers, the actual grazing incidence in the majority of grazing grounds is far heavier. To deal satisfactorily with this demand is one of the chief problems of the department. Grazing requires to be better regulated and its incidence to be reduced gradually both for the sake of the better class of cattle and in the interests of fuel production, when the demand for the latter is insistent. Jungle grasses in the grazing grounds are eaten down by herds of village cattle before they have time to mature or spread and the trampling of cattle has a serious effect on fuel production. Attempts were made during the year to introduce into the neighbouring districts of *Guntūr* and *Chingleput* the kancha system of grazing which is applied to a very large area of grazing grounds in the *Nellore* district. The chief features of the system are the closing of the grazing grounds until the grass crop has matured, the reservation of grazing to the more valuable cattle and the elimination of the sheep until the horned cattle have had the full benefit of the grazing. Subject to variations to suit local conditions, the same methods should be tried in other districts whenever there is a prospect of success.

A second reform in process of introduction during the year under review was the raising of the grazing license fee with a view to reduce the incidence of grazing and permit the more valuable cattle required for agriculture to benefit by the always limited forest resources. Owners of plough cattle would pay considerably more than the present charge if there was any assurance of their bullocks obtaining good grazing, free from risk of infection, for a portion of the year. The enhancement of grazing fees was sanctioned in a considerable number of districts, but in the majority of cases owing to the prospect of a bad season the introduction of the enhanced fees was postponed.

18. *Sylviculture.*—There is nothing of particular importance to mention under this head. Clear felling and artificial regeneration were carried out on the usual scale at Nilambur and somewhat spasmodic attempts in many districts were made to spread the cultivation of sandal, red-sanders and *Cassia auriculata.*

In future years the clear felling of high forest and concentrated regeneration of the area felled is likely to engage the department's energies to a much greater extent than hitherto. In order to study the problems connected with this method the post of a research officer as Sylviculturist was sanctioned and Mr. Barry has since taken up the post.

19. *Exploitation*—(1) *Timber.*—Twenty-two thousand two hundred tons and 72,175 tons of timber were removed by departmental agency and by contractors, respectively, against 15,800 tons and 84,775 tons in the previous year. The increase in departmental removals occurred chiefly in the Western and Northern Circles. In the Western Circle 23,000 cubic feet of timber were supplied from *Malabar* and *South Coimbatore* divisions to the Indian Munitions Board for ship building and

about 26,000 cubic feet of miscellaneous species were supplied from *North Malabar* and *South Coimbatore* forests for the construction of piles, bridges and landing piers in Mesopotamia. Some 8,524 cubic feet of teak was delivered to Messrs. George Brunton & Co., Cochin, for the construction of a steamer, and a quantity of *Grewia tiliæfolia logs* was utilized by the Buckingham and Carnatic Mills Company, Limited, for the manufacture of tent poles for military use. A large quantity of teak was sold for building native crafts, and sal sleepers and scantlings were supplied from *Ganjām* to the Munitions Board and to the Public Works.

(2) *Fuel.*—Thirty-two thousand two hundred tons and 422,775 tons of fuel were removed departmentally and by contractors, respectively, against 26,775 tons and 534,550 tons in the previous year. The quantities would have been larger had not the sale of coupes been affected by the shortage of railway wagons.

(3) *Bamboos.*—During the year the value of bamboos sold was Rs. 2,76,655 against Rs. 3,12,485 in the previous year, the decrease being probably due to the absence of wagons and the uncertainty of the season. The value of bamboos extracted departmentally increased by Rs. 18,354. The chief centres of departmental collection were *Kurnool West* with the object of providing employment for the Chenchus and *South Malabar* for departmental timber operations.

(4) *Sandalwood.*—In the auction sales held at Satyamangalam in the Western Circle in December last, 219 tons of sandalwood were sold for Rs. 2,81,237 and in the sales held at Tiruppattūr and Vellore 213 tons were sold for Rs. 3,03,845. The average rate per ton was Rs. 1,280 and Rs. 1,421 in the Western and Southern Circles respectively. The total income realized during the year was Rs. 6,17,573.

(5) *Hay.*—Four thousand six hundred and ninety-eight tons of hay were supplied departmentally to the Military Farms Department (9th Secunderabad) Division and a sum of Rs. 1,41,426 was credited to the department, while 6,156 tons of hay were removed by the Military Farms Department on payment of Rs. 12,321.

(6) *Tanstuffs.*—The collection of tanning bark was continued under the agency of the Munitions Board. The total quantity collected was 56,917 candies. The current year's rentals were Rs. 4,77,643-3-8 and the department obtained credit for Rs. 2,62,488, thus sacrificing a revenue of over two lakhs, in accordance with the arrangement under which the department was credited with the average receipts derived from the sale of *Cassis auriculata* and other tanning barks during the five years preceding the year.

20. The value of minor produce extracted by departmental agency and by purchasers amounted to Rs. 1·69 lakhs and Rs. 18·76 lakhs, respectively, and decreased by Rs. ·33 lakh and Rs. ·65 lakh during the year under report. The value of removals under both the heads decreased by Rs. 2·21 lakhs in the Central Circle consequent upon the stoppage of departmental operations and other causes. This large decrease was, however, counterbalanced by slight increases in the other circles, chiefly on account of war activities, such as the supply of hay, tanning stuffs and bees wax for military purposes.

21. The estimated value of forest produce removed by right holders was Rs. 36,699 against Rs. 52,225 in the previous year and the value of produce granted free amounted to Rs. 37,237 against Rs. 39,591 in the previous year.

22. *Financial results.*—The total gross revenue during the year amounted to Rs. 49·17 lakhs, a decrease of Rs. 4·99 lakhs over that of last year. The decrease was spread over all the circles, except the Western where the gross revenue increased from Rs. 14 69 lakhs to Rs. 17·17 lakhs. The increase in the latter circle was due to increased receipts under sandalwood, to the realization of the sale-proceeds of hay supplied to the Farms department in the previous year and to increased receipts under 'grazing' in the four divisions of *Coimbatore*. The decrease in the other circles was principally due to the assumption of control of tanning bark by the Munitions Board and to the restrictions of railway transport.

23. The total expenditure under 'A.—Conservancy and Works' increased from Rs. 13·34 lakhs to Rs. 14·31 lakhs owing in the Northern Circle to the exploitation of timber in *Ganjām* for supply of sleepers and building materials and in the Western Circle to the increased felling of timber and bamboos and hay operations for supply to the Military Farms department. The increase was counterbalanced by a

decrease in the Central Circle on account of cessation of the departmental hay operations during the war. Expenditure was kept within the lowest limits throughout the year owing to the war.

The expenditure under 'B. Establishments' increased from Rs. 15·85 lakhs to Rs. 17·01 lakhs as the result of war allowance paid to Forest subordinates and to additional establishments sanctioned on the temporary scale in the Central Circle. The net surplus amounted to Rs. 17·85 lakhs.

24. *Research and experiments.*—The only research work undertaken was connected with the causes and incidence of the spike disease of sandalwood, on which Mr. Hearsey, Extra Assistant Conservator of Forests, was employed throughout the year.

The question of whether this officer should continue his investigations was considered by the Board of Revenue at the end of the year and in connexion with a report on the subject submitted by me after the close of year is now under the consideration of Government.

Under the orders of the Board of Revenue, the Director of Agriculture instructed the Government Entomologist to carry out experiments in lac cultivation on *Butea*, *Zizyphus* (*Jujuba*) and *Pterocarpus* trees in the Sadivayal valley of the *Central Coimbatore* division. The result of the experiments made has not yet been reported. Attempts to inoculate *Zizyphus* and *Butea frondosa* trees with lac were continued in the *West Kurnool* and *Central Coimbatore* divisions. The experiments were successful to the extent that a few trees were impregnated. The cultivation of lac is a cottage industry demanding the almost undivided attention of families trained in the proper methods. As a suitable employment for hill tribes such as the Chenchus or Sholagars the experiment has no prospect of success. If the experiments are to be continued it is desirable to introduce some families of lac cultivators from Central India.

25. *Administration.*—The following officers were in charge of the Forest Administration during the year :—

The Hon'ble Mr. M. E. Couchman from 1st July 1918 to 6th December 1918.

Mr. J. M. Turing from 23rd December 1918 to 22nd January 1919.

The Hon'ble Mr. N. E. Marjoribanks from 23rd January 1919 to 28th March 1919.

The Hon'ble Mr. L. T. Harris from 29th March 1919 to 31st May 1919, and

The Hon'ble Mr. S. Cox, who was appointed to the newly created post of the Chief Conservator from 1st June 1919 to the end of the year.

Mr. Couchman visited eight forest divisions and wrote notes of his inspection in the case of *Cuddapah*, *Kollegal*, *North Coimbatore* and *Kistna* divisions. Mr. Marjoribanks visited *Kurnool* and *Chittoor*.

Mr. G. S. Hart, C.I.E., Inspector-General of Forests, visited *Ganjām*, *South Malabar* and the *Nilgiri* divisions. In the course of his tour he dealt with the important questions of the future management of the *Ganjām* sal forests; with the extension of the teak plantations and treatment of the natural forests in the Nilambur valley; with the methods of restoration of the Mudumalai forests; and with the extension of Eucalyptus plantations and introduction of hard-woods on the Nilgiri plateau. He also visited Madras and discussed with Government various questions connected with the Forest Services and the appointment of a Chief Conservator.

Mr. H. A. Latham was in charge of the Northern Circle for the first half of the year and Mr. S. Cox who succeeded him till the end of May 1919. Mr. C. M. Hodgson held charge during the last month of the year. Mr. H. B. Bryant was Conservator of Forests, Central Circle, from 1st July 1918 to 2nd January 1919, Mr. H. F. A. Wood from 3rd January 1919 to 17th June 1919 and Mr. A. B. Jackson for the rest of the year. The charge of the Southern Circle was held by five officers for the period noted against them, Mr. P. M. Lushington from 1st July 1918 to 9th October 1918, Mr. H. F. A. Wood from 10th October 1918 to 30th December 1918, Mr. H. A. Latham from 31st December 1918 to 16th May 1919, Mr. A. B. Jackson from 17th May 1919 to 16th June 1919 and Mr. H. A. Latham for the rest of the year. Mr. C. D. McCarthy held charge of the Western Circle till 11th May 1919, when

he was succeeded by Mr. H. Tireman who was in charge for the rest of the year. All the District Forest offices except those of the two visions of *Gōdāvari*, *Kistna*, *Guntūr*, *Bellary*, *Anantapur* and *North Malabar* were inspected by the Conservators of Forests during the year. Of the three excepted divisions in the Central Circle, the lastnamed two were inspected after the close of the year. The Board of Revenue received the Conservators' inspection notes on the forests of *Vizagapatam*, *South Kurnool*, *Chingleput*, Vinukonda range of *Guntūr* division, *Cuddapah*, Mamundur forests of *Chittoor*, *Madura*, *Tinnevelly*, *Mangalore North*, fuel-working circles of Mettupālaiyam and Thadagam ranges and Dhone reserves in *Central Coimbatore division*. All the Conservators of Forests and all District Forest officers except those of *Kurnool East* and *South*, *Anantapur*, *Guntūr*, *Chingleput*, *South* and *West Vellore*, *North Salem*, *Tinnevelly*, *South Malabar* and the *Nilgiris* spent an adequate number of days in touring, and such short touring as occurred was almost entirely due to changes in *personnel*. All the range offices except one in *Kurnool East*, one in *Guntūr*, two in *Nellore*, one in *Chingleput*, one in *Tinnevelly*, one in the *Nilgiris*, one in *North Coimbatore* and one in *South Coimbatore* were inspected by the District Forest officers. The accounts of all except eight of the District Forest offices were inspected by the auditors of the Accountant-General's office and the results were reported to be generally satisfactory.

26. *Forest panchayats.*—A review on this subject is being separately submitted to Government.

27. *The Chenchus.*—The somewhat optimistic view expressed in the Board's Administration report of 1917-18 with regard to the settlement of the Chenchu problem was unfortunately not borne out by the facts. Owing to a number of factors, such as rise of prices, food scarcity in the Nallamalais almost amounting to famine, failure to provide suitable permanent work, want of provision for the maintenance of the women and children at the Gudems, and general absence of sufficient control during a particularly difficult period, the Chenchus got out of hand and were responsible for a great deal of crime. The Special Chenchu officer never relaxed his devoted efforts on behalf of this unfortunate tribe and did all that could be done at the cost of his health and in most disheartening and difficult conditions. But circumstances were too strong for him and many of the best-behaved Chenchus were led away by the budmashes of the tribe to a life of theft and dacoity.

Since the close of the year the whole Chenchu question has been examined by Mr. G. F. Paddison, Protector of depressed classes, the Collector, the Conservator, the District Forest officer, Mr. Saunders and myself; and as the result of our tour of inspection of the most troublesome Gudems fresh proposals have been submitted to Government.

28. *Miscellaneous.*—The reorganization of the subordinate Forest staff was sanctioned by the Secretary of State during the year under report but was not brought into force until the current year.

The recommendations of the Public Services Commission with regard to the Imperial and Provincial Forest Services were communicated with the Government of India's views to the Madras Government during the year; and a Committee of Forest officers consisting of Mr. R. D. Richmond, Mr. Venkataramana Ayyar and the undersigned was appointed to report on the subject for the information of Government through the Board of Revenue. Their report together with that of the Board was submitted in January 1919.

29. *Forest charges.*—The headquarters of the Southern Circle was transferred from Trichinopoly to Salem in December 1918. As most of the small reserves of *Trichinopoly* and *South Arcot* divisions were earmarked for disafforestation, a rearrangement of divisions was rendered necessary and the formation out of the revenue districts of *North Arcot*, *South Arcot* and *Salem* of six forest divisions, viz., *South Vellore*, *West Vellore*, *North Salem*, *Central Salem*, *East Salem* and *South Salem* was proposed by the Board of Revenue, and sanctioned by Government after the close of the year.

30. Mr. P. M. Lushington, Conservator of Forests, retired from service during the year, and with him left the last of the Imperial officers serving in the Madras Presidency who had been educated at the Forest College at Nancy. Captain

Welchman who had held charge of the Parlakimedi forests for 11 years and had introduced forest conservancy among the Savara hillmen with conspicuous success died in hospital in Calcutta in April last. He is a great loss to the department. Among Imperial officers, Messrs. Cox, Foulkes, Wilson, Clear, Rigold, Dyson, Whitehead and Bennett were absent for all or for a greater portion of the year on Military service or other duty connected with the war; and Messrs. Cornwell, Hart, Mitchell, Mahony, Walpole, Ashe, Brand, Gaudoin and Woodhouse Adolphus of the Provincial Service were similarly employed. The department was throughout the year extremely short-handed in the higher ranks and officers had to be employed in charge of divisions without the knowledge or experience necessary to manage them satisfactorily. From the Conservators' reports it would appear with one or two exceptions that all officers did their best.

31. *Forest College.*—The College continued to work satisfactorily. Out of the 28 students who sat for the final examination two Government students won the honours certificate. Twenty students obtained the higher standard certificates and six the lower standard. While no student showed exceptional ability, the men at the bottom of the list were above the average and there were no failures. The final examinations in all the subjects were conducted by examiners from outside the staff of the College and the results were satisfactory.

The 1918–20 class started with 33 students and closed the year with 30. By the close of the first term three men who were found unfit to continue the training were removed.

The Inspector-General of Forests visited the College and the students of both the divisions at Nilambūr in December 1918.

32. *General rules under the Forest Act.*—The working of the timber and sandalwood transit rules was generally satisfactory. The timber transit rules were extended to the whole of the *West Cuddapah* and *Chittoor* divisions. The people generally availed themselves of the privileges allowed by the rules under section 26 of the Forest Act and there were no complaints of any importance except in *Trichinopoly* where it is reported that much damage was done by felling and firing of unreserves for 'ponakad kumeri' cultivation on the hills.

33. *Improvement of water-supply in Government grazing grounds (G.O. No.* 1622, *Revenue, dated 4th June* 1914).—Two tanks each in *Gōdāvari Lower* and *Kurnool East* and one in *Kurnool South* were repaired and one well was sunk in *Kurnool East.* Expenditure under this head was not incurred in *Kistna* and *Kurnool West* owing to financial stress. In the three divisions of *Cuddapah* and in *Chingleput* ponds, wells and water sources were repaired. In *South* and *West Cuddapah* and *Nellore*, public-spirited ryots were permitted to repair some wells. In *North Vellore* one well and 215 bunds were repaired. Three tanks in *South Arcot* and one well in *Madura* were repaired. In *South Salem* and *Trichinopoly* 152 and 22 bunds respectively were repaired. In *South Vellore* investigations into the question of supply of good drinking-water on the Javadis by a system of tube wells were continued. Tube wells were constructed and pipes laid at Komattiyeri and were nearing completion at Mandaparai. Boring operations at Veerappanur were completed and an estimate for the laying of pipes was awaited from the Agricultural Engineer. The amount spent during the year on investigation and construction was Rs. 1,900. In *West Vellore* division a sum of Rs. 900 was spent on tube wells. Three departmental wells and seven village wells on the hills were repaired. Out of a grant of Rs. 1,000 made by the district board for improving the water-supply and sanitation of the Malayali villages, a small amount was spent, and more work could not be done owing to the difficulty of obtaining skilled labour on the hills.

34. *Opening of small coupes in the vicinity of villages for rural supply (paragraph* 20 *of G.O. No.* 3020, *Revenue, dated* 13*th October* 1913 *on the Forest Committee's report).*—Generally speaking fuel-coupes are opened whenever a contractor can be obtained to work them even in forest which on sylvicultural grounds should be closed to felling. If no contractor will undertake the felling it may generally be assumed that the demand is too small to be worth consideration.

35. *Patrol system (paragraph* 22 (1) *of G.O. No.* 3020, *Revenue, dated* 16*th October* 1913 *on the Forest Committee's report).*—The system was in force in all the divisions in

the Northern Circle except *Ganjām* and *Gōdāvari*, and was not uniformly successfu The beat *cum* gang system which was adopted in *Kistna* is reported to have worked fairly well. In the Central Circle the system was in vogue in three divisions of *Cuddapah* and in one of the ranges of *Chittoor* and is reported to have worked satisfactorily. In the Southern Circle the system was continued in *North Vellore*, *South Salem* and in one range in *Trichinopoly* and its working is reported to be unsatisfactory. In the Western Circle two new patrol sections were formed chiefly for patrolling sandal areas in *North Mangalore* division and a few cases were detected. In *Central Coimbatore* the system was a failure for want of reliable men.

36. *Conference.*—A conference was held in Madras by the Forest Commissioner with the Conservators of Forests in February 1919. Another conference was held at Coimbatore by the Chief Conservator with the Conservators of Forests on 28th and 30th June 1919. Messrs. A. A. F. Minchin and R. D. Richmond attended the Sylvicultural Conference held at Dehra Dun in October 1918. Mr. Cox attended the meeting of the Board of Forestry and the Lac Conference at Dehra Dun in March.

## APPENDIX.

The following is a summary of the progress made in Forest Administration in the Madras Presidency during the quinquennium ending with the year 1918–19.

2. *Administrative control.*—The Forest Department was under the control of the Board of Revenue until the last month of the quinquennium when it was transferred to the control of the Chief Conservator of Forests.

3. *Changes in the controlling staff.*—The headquarters of the Southern Circle was transferred from Trichinopoly to Salem in December 1918. In order to concentrate the attention of the department on the more valuable forests of *Salem* and *North Arcot* divisions, the present revenue districts of *North Arcot*, *South Arcot* and *Trichinopoly* were rearranged into six forest divisions, viz., *South Vellore*, *West Vellore*, *North Salem*, *Central Salem*, *East Salem* and *South Salem*. *Cuddapah* was divided into three forest charges, designated *North Cuddapah*, *South Cuddapah* and *West Cuddapah*. The division of *South Kanara* into two forest charges, viz., *North Mangalore* and *South Mangalore* was also sanctioned by Government during the period and their sanction to form a fourth division in *Kurnool* was received after its close.

4. *Forest Administration.*—The work of the department during the period, which synchronized with the great war, has been handicapped by the necessity for economy but more seriously by the depletion of the staff. Eight officers of the Imperial and ten officers of the Provincial and subordinate staff joined the army and the Indian Defence Force made further claims on the time of most of the European and Anglo-Indian officers of the department. The officers who remained on duty were taxed not merely in carrying out their regular duties but in meeting the heavy calls made on them for supplies to the army. The department is the poorer by the loss by death on 26th May 1917 of Mr. H. F. Arbuthnot, Deputy Conservator of Forests, to whose energy the extension of the kancha system of grazing in *Nellore* was so largely due. In Mr. G. H. Welchman, Special Forest Officer of the Parlakimedi Maliahs, who was appointed to the Indian Army Reserve of officers as Labour Commandant of the Savaras and Oriyas and died in hospital at Calcutta on 17th April 1919, the department also lost a valuable officer.

5. The classification of forests according to the Forest Committee's recommendation has been practically completed during the quinquennium. During 1918–19, 197 reserves and 15 blocks of unreserves covering an area of 534 square miles were under the management of 362 panchayats. Mr. E. A. Davis, I.C.S., was on special duty from February 1915 to August 1916 for the purpose of accelerating the introduction of forest panchayats. The question of appointing a Special officer to supervise and promote the panchayat system is now under the consideration of Government.

6. The difficulty of dealing with the Chenchus, who have long been responsible for a great deal of forest and other crime in parts of *Kurnool*, prompted Government in December 1916 to appoint a Special officer, Mr. Saunders, Assistant Superintendent of Police, to secure the confidence of the tribe and to investigate methods of ameliorating their condition and of controlling them. During 1917, Mr. Saunders obtained an intimate knowledge of and influence over the Chenchus and although during 1918 they were more troublesome than ever before, the apparent want of success was due to a combination of adverse conditions, such as great local scarcity and high price of food-grains and absence of suitable permanent employment.

Much is now known about the Chenchus which was in doubt before, and although the problem appears thereby all the more difficult, future measures of control and improvement are likely to give better results.

Mr. A. W. Lushington, C.I.E., Retired Conservator of Forests, was employed on special duty in December 1916 to investigate the possibility of the commercial exploitation of the forests. The appointment ceased in January 1918. His experiments in the seasoning of

timber were not carried on long enough to justify any conclusion being drawn from them, but he did some excellent work in the valuation and the identification of species in the Western Ghaut forests. He is one of the very few who can identify the bewilderingly similar evergreen trees of these forests.

The appointment of a Special officer of the Golgonda Agency and Hill Madgole in the Vizagapatam district was sanctioned during the period, in order to conserve the forests in the catchment area of a number of hill streams.

Mr. F. J. Marshall was appointed Forest Engineer in 1914 with Salem as his headquarters and has been in charge of the most important engineering works in the Southern and Western Circles.

An important change of forest administration was effected in G.O. No. 260, Revenue, dated 7th February 1916, which modified the position of the Collector and the District Forest officer. While recognizing the power and authority of the Collector as head of the district for the welfare of the community in general, the District Forest officer was declared to be the head of the Forest Department in his own district and the Conservator was made responsible for and given control over all professional, departmental and financial matters in his circle.

7. The war has revealed not only the undeveloped forest resources of the State but the necessity for Government itself undertaking the exploitation of its forests. Private firms cannot be expected nor are they willing to invest large sums of money in tramways, saw mills, machinery and roads together with the responsibility for and cost of regenerating the areas of forest exploited. It is essentially a matter for the State in this country as in others. Unfortunately the Forest Department at the outbreak of the war was under-staffed in all departments and for want of previous experience and essentials for forest working on a larger scale was unable to meet the enormous demands for timber. Whatever was possible was done and especially in the matter of tanning bark and hay valuable contributions were made.

8. *Organization.*—The period under report was marked by a sanctioned increase in the administrative staff which was augmented by ten Imperial and ten Provincial officers. Provision was also made for four additional Imperial officers for working plans and research work and for nine additional Provincial officers as their assistants. This increase of staff, so badly needed for future development, can only be given effect to gradually as officers are recruited and trained. In the meantime owing to retirements and deaths, the cadres are depleted to an abnormal extent and development of the department's work is rendered most difficult. During the last half year of the period the Secretary of State also sanctioned the reorganization of the executive and protective staffs of the Forest Department at a cost of three lakhs.

9. *Legislation.*—In consequence of the appointment of Chief Conservator of Forests as head of the Forest Department, the Madras Forest (Amendment) Act, 1919, was passed and received the assent of His Excellency the Viceroy.

10. *Changes in area.*—The area under control remained practically unaltered as shown below:—

| | At the commencement of the period. | At the end of the period. |
|---|---|---|
| | SQ. MILES. | SQ. MILES. |
| Reserved forests ... ... ... ... | 18,863 | 18,712 |
| Reserved lands ... ... ... ... | 802 | 682 |
| Total ... | 19,665 | 19,394 |

The slight difference in area noted above is due to disafforestation of reserves in pursuance of the recommendations of the Forest Committee.

11. *Forest settlement.*—Forest settlement work except in the Agency tracts is practically complete in the Presidency. There are about 500 square miles of forests awaiting settlement, mostly in the divisions of *Godāvari* and *Salem*. A scheme for the further reservation of areas in the Rampa Agency has been formulated and is being carried out.

12. *Demarcation.*—The total length of artificially marked boundaries at the end of the quinquennium was 34,454 miles and is now 32,575 miles. The decrease is due to disafforestation of certain reserves and plantations, to rectification of errors at settlement and to the adoption of Survey of India figures.

13. *Surveys.*—About 336 square miles were surveyed by the Survey of India on the 2 inches scale chiefly in *Nellore* and *West Vellore* divisions. About 160 square miles were surveyed by the party on the 4 inches scale.

14. *Working-plans.*—During the quinquennium working-plans were in force for 8,312 square miles against 8,091 square miles in the previous quinquennium. The areas for which working-plans were newly sanctioned by the Board of Revenue during the period were considerably greater than 221 square miles, but owing to disafforestation of areas, cancellation of working-plans on account of the impossibility of carrying out their provisions, and in some cases the termination of the period covered by the working-plans, the net increase in the areas under working-plans does not show an appreciable increase.

15. *Communications and buildings.*—The average annual expenditure on communications, buildings and other works amounted to Rs. 2,77,505 during the period under review against Rs. 3,19,000 in the previous period. The fall in expenditure is due to the postponement of works on account of the war. Nearly a lakh of rupees was spent under these heads in the Southern Circle for the construction of roads on the Javadis. The period ended with a large accumulation of building and communication works approved of in principle but not carried out for want of funds and staff.

16. *Forest offences.*—The average annual number of forest offences rose to 28,933 from 28,500 in the previous period. Cases of injury to forests by fire and offences of unauthorized felling increased from 1,104 and 17,574 to 1,318 and 18,716 respectively. There was a very small increase in the number of other offences. Offences of unauthorized grazing fell from 8,634 to 7,722 during the period under review.

17. *Fire protection.*—The average area under systematic fire protection amounted to 16,060 square miles against 13,000 square miles in the previous quinquennium. The results of protection appear to remain fairly constant and the department has yet to find a satisfactory method of preventing fires in the large and inflammable hill forests of the drier zones.

18. *Protection from cattle.*—At the beginning of the quinquennium one-sixth of the total area of forests in the Presidency was closed to grazing. During the closing year of the period the area open to grazing was reduced to one-fourth of the total area of forests, and the incidence of grazing from 3,783,000 to 2,117,420 animals. The grazing revenue, however, increased somewhat owing to higher fees. The decrease in the number of animals grazed is mainly due to the final elimination of the goat. The average incidence during the last year of the quinquennium worked out to $4\frac{1}{2}$ acres of grazing to each animal; but since areas open to grazing contain large tracts which are inaccessible to cattle or to which cattle are not driven in large numbers, the actual grazing incidence is often far heavier. Endeavours were made during the period to distribute the grazing more evenly, to provide facilities for watering cattle in the forests, and to reduce the incidence when the forests were being seriously injured by overgrazing. It is hoped by the gradual introduction of new methods such as the forest village system, the panchayat system and the kancha system to gradually interest the villager in the conservancy and improvement of the grazing grounds adjacent to his village.

19 *Yield and outturn.*—The following statement shows the annual average otturn of the forests for the two periods :—

| — | Timber and fuel. | Bamboos in number or in value. | Minor produce in value. |
|---|---|---|---|
| | C.FT. | NO. | RS. |
| 1909-10 to 1913-14 .. .. | 26,554,000 | 40,306,000 | 16,30,000 |
| 1914-15 to 1918-19 .. .. | 25,161,000 | RS. 3,11,727 | 18,43,032 |

The value of minor produce increased by about 12 per cent and is due mainly to high prices realized for tanning barks. In the absence of information as to the quantity of bamboos extracted by all agencies during the quinquennium under review, no comparison is possible during the present period and the one preceding it.

20. *Financial results.*—The average annual financial results of the last two periods were as follows :—

| — | Revenue. | Expenditure. | Surplus. |
|---|---|---|---|
| | RS. | RS. | RS. |
| Average for 1909-10 to 1913-14. | 40,72,000 | 31,86,000 | 8,86,000 |
| Average for 1914-15 .. | 40,17,852 | 29,36,651 | 10,81,201 |
| Do. 1915-16 .. | 39,38,475 | 26,07,949 | 13,30,526 |
| Do. 1916-17 .. | 47,79,016 | 27,84,374 | 19,94,642 |
| Do. 1917-18 .. | 54,16,496 | 29,19,596 | 24,96,900 |
| Do. 1918-19 .. | 49,16,509 | 31,31,939 | 17,84,570 |
| Total for the period 1914-15 to 1918-19. | 2,30,68,348 | 1,43,80,509 | 86,87,839 |
| Average for the period .. | 46,13,000 | 28,76,000 | 17,37,000 |

Admitting the necessities of the war, the very degraded condition of a large percentage of the Madras forests and the absence of facilities for working the more remote and therefore better-stocked forests should otherwise forbid the accrual of these very large surpluses. If the forest property as a whole is ever to approach its full bearing capacity capital must be sunk in communications, buildings, machinery and plant and current revenue must be ear-marked for

increase in establishments and improved conservancy. The present annual depreciation of forest capital by fire alone must run into many lakhs of rupees and the failure of forest conservancy on very large areas of forest in the Ceded districts and elsewhere gives much cause for anxiety.

21. *Forest education.*—During the period under review, the Madras Forest College was transferred to its new site at Lawley Road, Coimbatore, where buildings and equipment have been provided at a cost of over 10 lakhs. The new buildings were opened on 14th October 1915 by His Excellency Lord Pentland who had himself laid the foundation stone in 1913. Students deputed by the Native States of Central India, Hyderabad, Travancore and Cochin and by the Governments of Bombay, the Central Provinces and Ceylon are admitted for training in the college. In all 135 students passed out of the college during the period under review; of whom ten obtained honours certificates, 100 the higher standard and 25 the lower standard certificates. Of these 84 were subordinates of the Madras Forest Department.

The four vernacular training schools (one for each circle) with a six months' course for the training of foresters and forest guards were held annually and were very successful in their object.

22. *Hill tribes.*—The co-operation of the hill tribes with the Forest Department was particularly successful on the Javadi Hills where the whole revenue administration was entrusted to the Forest Department and in the Agency tracts of the Northern Circars. During the quinquennium forest conservancy was started in Hill Madgole and in Rampa without friction. In the latter country no Forest officer had set foot for 25 years.

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**Order—No. 2293, Revenue (Special), dated 11th December 1919.**

Forest No. 49.

With his letter read above the Chief Conservator of Forests submits his report on the administration of the Forest Department for the year ending 30th June 1919 and a summary of the progress made in forest administration in the Presidency during the quinquennium ending with that year. The quinquennium synchronised with the great war and consequently war conditions hampered the activities of the department during the period. Strict economy was necessitated and all but the most urgent items of work were postponed. Apart from this the work of the department was handicapped more seriously by the depletion of the staff due to the absence of officers on military duty, to the demands of the Indian Defence Force and to the temporary cessation of recruitment for the Imperial Service. The officers who remained on duty were taxed not merely in carrying out their regular duties, but in meeting the heavy calls made on them for supplies to the Army of timber, tanstuffs and hay. The sanction obtained for augmenting the staff of the department in all its branches including Imperial, Provincial and subordinate services, at a total cost of over Rs. 5 lakhs per annum, could not be given effect to during the quinquennium owing to war conditions.

From the point of view of the ryot population the chief feature of interest in the quinquennium was the completion of the classification of the forests in accordance with the recommendation of the Forest Committee of 1912. In pursuance of this classification reserves which must be preserved for climatic purposes or for the protection of water sources, or which were valuable as producers of timber or fuel, have alone been retained in the management of the department. Forests which were unimportant from these points of view and which were mainly useful for grazing have been disafforested and wherever possible handed over to the management of forest panchayats. Endeavours have been and are still being made to distribute grazing more evenly, to provide facilities for watering cattle in the forests and to reduce the incidence of grazing by the gradual introduction of new methods such as the forest village system, the panchayat system and the kancha system, the underlying object of all of which is to interest the villager in the conservancy and improvement of the grazing grounds adjacent to his village.

During the quinquennium the war revealed the magnitude of undeveloped forest resources of the State and the necessity for their exploitation by Government. The question of the measures to be taken to profit by the lessons of the war will form an important feature of the programme during the current quinquennium.

2. The most noteworthy feature of the year was the appointment of a Chief Conservator of Forests and the transfer of the control of the department from the Board of Revenue to the Chief Conservator. The question of appointing a Chief

Conservator had engaged the attention of Government for a long time and sanction for the creation of the post was accorded by the Secretary of State at the end of 1917, but owing to the war effect could not then be given to it. On 1st June 1919 the Hon'ble Mr. Cox assumed charge of the office and the connexion of the Board of Revenue with the Forest Department which had subsisted ever since the creation of the department in its present form, came to an end.

Another matter of importance and one which is expected to produce substantial results was the appointment of a Forest Utilization Officer for the Presidency. It was becoming more and more apparent that forest officers in charge of divisions had neither the time nor the training necessary to enable them to undertake the exploitation of the forests in their charge on a commercial scale. The necessity for the appointment of an officer to attend solely to duties connected with the commercial side of forest development was brought to the notice of Government during the year and the sanction of the Secretary of State was obtained for the entertainment of a Forest Utilization Officer. Mr. Irwin who has been appointed to this post entered upon his duties after the close of the year and has already submitted several profitable schemes for the working of certain forests.

An officer to conduct forest researches with reference to local conditions was also appointed during the year but he entered upon his duties only after the close of the year.

The appointment of Forest Engineer which had been temporary since 1914 was made permanent.

3. Towards the close of the year the sanction of the Secretary of State was received for the reorganization of the executive and protective staffs of the department and partial effect was given to this sanction with effect from 1st October 1919. The number of subordinates, which had long been recognized as inadequate, was largely increased and their pay and prospects considerably improved. The minimum pay of rangers was raised from Rs. 50 to Rs. 60 and the maximum from Rs. 150 to Rs. 200. The class of deputy rangers, which was found unsatisfactory in many respects, was abolished and merged into that of foresters. The minimum pay of foresters was raised from Rs. 15 to Rs. 20 and that of forest guards from Rs. 8 to Rs. 10.

Consequent on the abolition of the grade of deputy rangers a new system of recruitment has been introduced. Hitherto the practice had been to appoint as deputy rangers men of suitable educational qualifications and of good physique. After two years those of them who showed signs of promise were deputed to undergo a course of training at the Forest College, Coimbatore, with a stipend of Rs. 50 per mensem. Those who completed the training satisfactorily and obtained honours or higher standard certificates were appointed as rangers. Under the new system of recruitment, suitable men will be entertained as probationary rangers on Rs. 50 per mensem and will be posted to work in a district. After two years' probation those who give promise of becoming successful rangers will be sent to the Forest College, Coimbatore, and on completing the prescribed course of training there satisfactorily will be appointed as permanent rangers. The Government hope that under the new system of recruitment and with the improvement in pay and prospects consequent on the reorganization of the subordinate staff it will be possible to attract to the department recruits of the right stamp in increasing numbers.

4. *Paragraph* 10 *of the Chief Conservator's letter.*—It is a matter for congratulation that the number of forest offences has decreased year by year during the last four years. A number of reasons for this marked decrease have been given by local officers but a probable reason is, as pointed out by the Chief Conservator, that the villagers are becoming used to forest restrictions and are less inclined to contravene the rules.

| Year. | Number of forest offences. |
|---|---|
| 1914–15 ... ... ... ... | 32,541 |
| 1915–16 ... ... ... ... | 30,885 |
| 1916–17 ... ... ... ... | 28,087 |
| 1917–18 ... ... ... ... | 27,091 |
| 1918–19 ... ... ... ... | 26,160 |

5. *Paragraph* 16 *of the Chief Conservator's review.*—*Fire protection* is one of the important problems in regard to which the department has yet to find a successful solution. So far as the figures for the year under review go, they show a decrease

in the number of fires and of areas affected as compared with the figures of the previous year. But the Chief Conservator admits that the figures are unreliable. The Government are glad to observe that the co-operation of hill tribes continues to be a satisfactory feature of the administration in Ganjām and Vizagapatam and on the Javadi Hills. But the Chenchus of the Kurnool district are reported to be responsible for burning extensive areas of forest. A special officer, Mr. Saunders of the Police Department, was appointed in 1917 to devise measures to improve their condition, to supervise their conduct and to try and induce them to abandon their practice of destroying the jungle. During the year under review, however, the Chenchus, owing to a variety of causes chiefly economic and in spite of the devoted endeavours of Mr. Saunders, got out of control and perpetrated a considerable amount of damage to the forests on the Nallamalais. The question of the measures to be taken to wean this unfortunate hill tribe from their criminal and destructive habits is separately engaging the attention of Government.

6. *Paragraphs* 22 *and* 23 *of the Chief Conservator's review—Financial results.*—The net surplus of revenue over expenditure amounted to Rs. 17·85 lakhs. The large accumulation of surpluses in the last few years was due to abnormal conditions, created by the war. The department is already embarking on schemes of exploitation and a considerable expenditure on communication, buildings, machinery, etc., will be necessitated but it is hoped that this expenditure may result in considerable profit accruing to the department in future years.

7. *Paragraph* 26 *of the Chief Conservator's review.*—A separate review will be published, dealing with the work of forest panchayats. Forest panchayats were first started in 1914, as a result of the recommendations of the Forest Committee, but they have not been as successful as was hoped. To investigate the causes of this lack of success and to devise measures for extending the system on a sound basis, the Government have resolved to place an officer of the Indian Civil Service on special duty at an early date.

8. *Appendix B of the reports.*—The large increase in the number of cattle impounded during the year over the figures of the previous years requires explanation.

9. The Inspector-General of Forests paid a visit to the Presidency during the year and favoured the Government with an interesting and valuable note on his inspection of the forests in Ganjām, South Malabar and the Nilgiri districts.

(True extract)

L. D. SWAMIKANNU,
*Tempy. Addl. Secretary to Government.*

To the Chief Conservator of Forests.
" Board of Revenue, (Land Revenue).
" Accountant-General, Madras.
" Government of India, Department of Revenue and Agriculture (with C.L.).
" Inspector-General of Forests (with C.L.).
" Publicity Officer.
Editors' Table.

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